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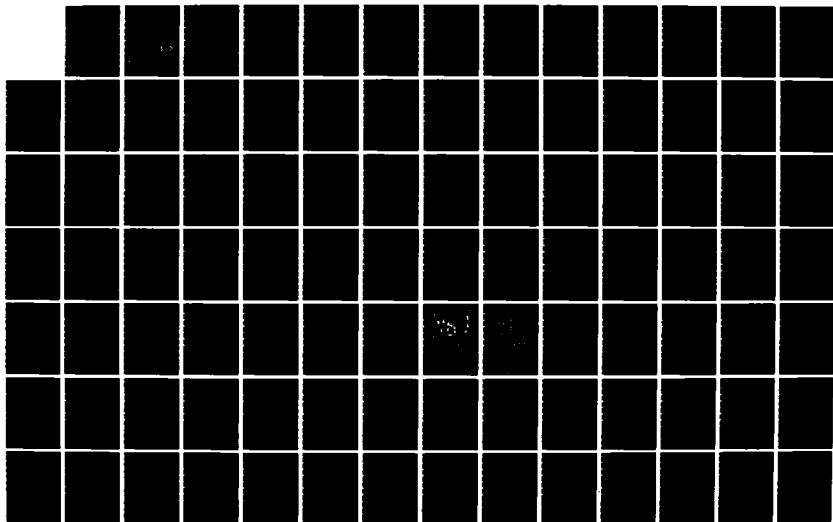
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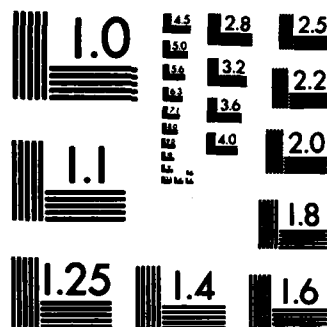
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MODERN APPLICATION OF  
LIDDELL HART'S DOCTRINE ON INFANTRY TACTICS

A thesis presented to the Faculty of the U.S. Army  
Command and General Staff College in partial  
fulfillment of the requirements for the  
degree

MASTER OF MILITARY ART AND SCIENCE

by

RAVINDRA R. PALSOKAR, LTC, INDIAN ARMY  
PSC, Army Staff College, Camberley, U.K., 1975

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This study examines the modern application of Liddell Hart's doctrine on infantry tactics with emphasis on the expanding torrent method of attack and the tactical use of the indirect approach.

This study traces the development of Liddell Hart's theories of the mobile attack. What initially started as purely infantry tactics were soon adapted to the use of tanks, infantry, artillery and air, as combined teams. This doctrine of Liddell Hart was later effectively applied by the Germans during the Second World War, giving a new dimension to the concept of the mobile battle. This study examines the applicability of Liddell Hart's doctrine to both high and low technology environments. The Sino-Indian border conflict of 1962 is used as a case study to show that tenets of mobile warfare are applicable in most adverse conditions.

This study concludes that Liddell Hart's doctrine of mobile warfare still has applicability. The correct grouping of infantry and tanks with other essential arms, as combined arms teams is necessary for successful application of this doctrine.

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

# ABSTRACT

MODERN APPLICATION OF LIDDELL HART'S DOCTRINE ON INFANTRY TACTICS, by Lieutenant Colonel Ravindra R. Palsokar, India, 97 pages.

This study examines the modern application of Liddell Hart's doctrine on infantry tactics with emphasis on the expanding torrent method of attack and the tactical use of the indirect approach.

The study traces the development of Liddell Hart's theories of the mobile attack. What initially started as purely infantry tactics were soon adapted to the use of tanks, infantry, artillery and air, as combined teams. This doctrine of Liddell Hart was later effectively applied by the Germans during the Second World War, giving a new dimension to the concept of the mobile battle. This study examines the applicability of Liddell Hart's doctrine to both high and low technology environments. The Sino-Indian border conflict of 1962 is used as a case study to show that tenets of mobile warfare are applicable in most adverse conditions.

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## CHAPTER I

### THE ADVOCATE OF MOBILITY

#### Section 1: INTRODUCTION

Liddell Hart's name is familiar to those who study warfare, as an advocate of mobility, and his theories on mobile warfare are of particular interest to soldiers who train to succeed in a future conflict. Today, it is an accepted fact that to win in battle, especially against a numerically stronger enemy, it is necessary to introduce mobility superior to that of the opponent. This is best done by using all arms such as tanks, infantry, artillery, engineers and air, grouped as combined arms teams. But this is a relatively new concept, which owes much to theorists such as Liddell Hart. The introduction of the tank during the First World War did not trigger a revolution in mobile warfare for two reasons. First, earlier tanks were not mechanically reliable and second, because commanders were slow to realize their potential on the battlefield. At the end of the First World War, there were many skeptics who did not believe in the tactical and strategic uses of the tank.

During the period between the two world wars, there were many advocates who preached the new concept of mobility. Foremost among them were, J.F.C. Fuller<sup>1</sup> and Liddell Hart. Fuller had been actively involved in the development of tank tactics during the first war as a staff officer of the tank corps. Liddell Hart, on the other hand, had served with the infantry and had no experience with tanks. Fuller envisioned the

tank alone as the weapon of mobility on the battlefield. Liddell Hart, with his background of infantry service, commenced his writing career as a proponent of infantry mobility, with the tank as an adjunct to infantry.<sup>2</sup> However, very soon he realized that conditions permitting, the tank would have a predominant role. But he did see a role for the infantry in conjunction with tanks and was the first to suggest the formation of combined arms teams. It is to Liddell Hart's credit that he visualized this concept long before anyone else and indeed before the tank had been successfully proved as the weapon of strategic and tactical mobility.

The Second World War more than vindicated the assertions of the tank school. General Guderian freely admitted to Liddell Hart's influence on the development of the German doctrine of mobile warfare.<sup>3</sup> A striking feature of this war was the orchestration of all arms on the battlefield to include tanks and infantry with other supporting arms. It appeared at the end of the war that future conflicts would follow the same pattern. However, introduction of weapons of greater lethality has ensured that the rules of fighting require constant revision and entail relearning some old lessons.

This has been vividly demonstrated in the Arab-Israeli conflicts including the one recently concluded in Lebanon. These wars serve as a model because of the employment of modern weapons by both sides and the innovativeness of Israeli commanders, who have shown how a totally outnumbered force can fight and win. Following the Israeli lead, it was thought some years ago, that tanks properly handled, were so effective on the battlefield that they needed no support from the infantry. The

move away from the combined arms team stemmed from the Israeli experience in the Six Day War of 1967 when their tank formations swept all before them. This led the world, including Israel itself, to believe that on the modern battlefield the tank was supreme<sup>4</sup> and the role of infantry could be subordinated. This belief was proved incorrect in 1973 when Israel's tank formations were held up against strong Egyptian antitank screens for want of infantry. The lesson that mobility depends upon the proper use of all arms has had to be relearned.

This lesson has common applicability. Since the Second World War, there have been a number of other conflicts in the world such as the ones in Korea, Indochina and between India and Pakistan. In all these, infantry has played the greater role. This has been due either to the nature of the terrain or because the countries concerned lacked advanced technology. Experience has shown that however restricted the scope, the combined arms team and the necessity to achieve mobility, have been key factors in achieving success. Liddell Hart's theories on mobility, thus have a special and significant relevance. It is proposed to examine these theories with particular reference to the role of the combined arms team. This study will restrict itself to the tactical application of these theories. To differentiate between strategy and tactics, the term strategy will refer to both grand strategy and strategy, as defined by Liddell Hart himself.<sup>5</sup> Tactical will mean the application of strategy 'on a lower plane',<sup>6</sup> that is to fighting in the field or, the application of men and weapons to the ground.

The study will examine the development of Liddell Hart's doctrine, its criticism and analysis. Its applicability will be tested in terms of

modern conditions and conclusions will be drawn in terms of organization and tactics.

## Section 2: BRIEF BIOGRAPHICAL SKETCH

Liddell Hart's military career began in December 1914<sup>7</sup> when he was commissioned into the King's Own Yorkshire Light Infantry as a Second Lieutenant. He went to France in September 1915, where he became a gas casualty in July of the following year and was later evacuated to England. He first started writing on military subjects<sup>8</sup> while recovering in the hospital and during convalescence wrote his first book on impressions of the Somme offensive. This book, however, was not published.<sup>9</sup> After his recovery, Liddell Hart was posted as Adjutant of a volunteer battalion, first at Stroud and then at Cambridge. In this capacity he started formulating drills and tactics for training and had published the first of his books for circulation within the volunteers.

The war came to an end before he was medically fit for general service. As the war ended, his "tactical thinking was on the boil"<sup>10</sup> and the next few years saw a number of articles and lectures on training and tactics. After brief service with the Army Education Corps and as a brigade staff officer, he was invalided out of service in 1924. In the meanwhile he had made himself known as a writer and a theorist. Disappointing as it may have appeared at first sight, Liddell Hart's discharge allowed him to develop and express his thoughts freely, which proved so very critical in later years.

On leaving the army, he was first a military correspondent of the Daily Telegraph from 1925 to 1935 and subsequently of the Times from

1935. He left the latter in 1939, just before the war began, after differing with the paper's editorial policy and he spent the Second World War as an independent observer and writer. However, no account of his time between the wars can be complete without mention of his association with Hore-Belisha, the war minister, in the latter part of 1937 and early 1938. As an unofficial advisor to the war minister, Liddell Hart felt that he could influence matters for the benefit of the army, but found the partnership to be dissatisfying and soon reverted to his independent role.<sup>11</sup>

He did not hold an official position during the war, a fact that surprised many.<sup>12</sup> Out of tune with public opinion on more than one issue, such as abhorrence of Germans in general and the Allied policy throughout the Second World War, Liddell Hart remained in the background. After the war ended, his prestige rose because his theories on mechanized warfare were convincingly proved in battle. The German generals freely acknowledged his influence on their tactics and this brought him increased popularity and readership.<sup>13</sup> He had not supported the dropping of atomic bombs on Hiroshima and Nagasaki, but after the war wrote extensively on the influence of nuclear weapons on strategy and warfare.

Immediately after the Second World War, Liddell Hart took keen interest in the treatment of German generals imprisoned in Britain and held detailed conversations with them. In later years, he wrote widely and on varied subjects. On the nuclear scene, he foresaw the strategy of deterrence.<sup>14</sup> He devoted much of his time to military history and took interest in the development and progress of Israel's army.<sup>15</sup> As he progressed in years, he was content to act the savant and became a



sort of senior adviser to an ever widening group of scholars, soldiers and others, who chose to correspond with him, until his death in January 1970.

### Section 3: WRITINGS ON INFANTRY TRAINING AND TACTICS BETWEEN 1918-1931

Liddell Hart's first published book was, Outline of the New Infantry Training, Adapted to the Use of the Volunteer Force. This was immediately revised the same year and republished as, New Methods in Infantry Training in October 1918.<sup>16</sup> This little book deals with the technique of handling and training infantry. But it is illustrative of the way his ideas developed, because the first sentence states that, "The principle of the new system is that the platoon should be the basis of all infantry training." The reason for this statement soon becomes clear as he describes all infantry tactics based on the platoon. This he was to explain further in the articles that he was to write subsequently.

This book was followed by the article, "Ten Commandments of the Combat Unit. Suggestions on its Theory and Training," in the Journal of the Royal United Service Institution (RUSI),<sup>17</sup> in May 1919. Here Liddell Hart states that the platoon and not the section is the basic tactical unit, because the former lends itself to maneuver which is the basis of all infantry tactics. Immediately following this article, was another again in the RUSI Journal in November 1919, titled, "Suggestions on the Future Development of the Combat Unit. The Tank as a Weapon of Infantry." The theme being that, "...the infantry are likely to retain their position as the decisive arm, provided they keep abreast of modern developments."

At the same time Liddell Hart was involved in revising the infantry manual and his views on infantry training and tactics were found sufficiently interesting to allow him to speak at the Royal United Service Institution. He spoke on November 3, 1920, and the lecture was titled, "Man-in-the-Dark" Theory of Infantry Tactics and the "Expanding Torrent" System of Attack. These theories will be explained in the next section in detail. At this stage, it suffices to say that while the subject matter dealt with infantry exclusively, it was equally applicable to the employment of tanks. The mobile attack was best suited to the new weapon of mobility, the tank. But Liddell Hart was not yet converted to tanks,<sup>18</sup> however, once he was, it was but an easy step to adapt his theories to mechanized warfare.

In 1921 The Framework of a Science of Infantry Tactics was published. This book elaborates the lecture and also has an appendix on, "A system for teaching the elements of tactics for a platoon". The book proved extremely popular and was published twice more, the third and revised edition being published in 1926. There is emphasis right through on infantry mobility and exploitation. By this time, however, Liddell Hart was considering that in suitable circumstances, tanks would be the predominant weapon. However, he did not convert fully to the Fuller School that any other arms was secondary on the battlefield. He wanted tanks and infantry to operate together, suggesting the modern combined arms team. He,

"...argued that there are both need and scope for a more mobile kind of infantry to cooperate with tanks in an armored force, and form part of it, for prompt aid in overcoming defended obstacles. I visualized with them as what I called 'tank marines', carried in armored vehicles along with the

land fleet - or putting it another way, as mechanised 'mounted infantry'."19

With this background, Liddell Hart's views on infantry were stated in a lecture on 'The Future of Infantry' that he delivered to officers of Southern Command in Tidworth in 1932. Afterwards the lecture was published as a book of the same name in 1933. His doctrine on infantry training and tactics and its future are fully stated in this book and it will be suggested, still hold good. At the time, they supported his earlier theories about infantry operations and those of mechanized warfare. The book not only had an appreciative audience in Britain and the United States but also in the German army.<sup>20</sup>

In 1928, Liddell Hart had published what might be his most significant contribution to military thought. This was his book, The Strategy of Indirect Approach. This concluded that throughout history, the strategic indirect approach has been decisive, whether its adoption was, "intentional or fortuitous."<sup>21</sup> Much has been written about the strategic impact as suggested by Liddell Hart. Examination shows that there is a tactical or immediate application to the indirect approach. This shall be examined later.

#### Section 4: THE EXPANDING TORRENT THEORY

Liddell Hart first enunciated the "Expanding Torrent" system of attack at the Royal United Service Institution in November 1920. It was coupled with his "Man-in-the-Dark" theory. He said that it was essential to define the principles of tactics and that this could be done by deducing them from the method of combat between two individuals. He likened the modern commander to a man in the dark<sup>22</sup> and by stating how an individual

would first grope for his foe, select a vulnerable spot, immobilize him, knock him out and finish him off, deduced the principles, in that order, of protective formation, reconnaissance, fixing, decisive maneuver, and exploitation. Then discussing the practical application of these five principles under two principles of security and economy of force, he proceeded to state his theory of the "Expanding Torrent".

If one were to critically examine Liddell Hart's deduction of tactical principles, it would appear that he was only restating in a different way, what great commanders had been practicing earlier. However, we see in his writings here and subsequently, the emphasis on exploitation. This is what sets him apart. Insistence on this particular principle led to his theory of the expanding torrent and subsequently to its application to mechanized warfare with telling effect. In all his later writings, great emphasis is placed on exploitation to reap the full fruits of an attack. The first mention of this all important factor was made in this lecture to be developed and refined in later writings.

He illustrated his theory by likening to it, "...a torrent bearing down on each successive bank or earthen dam in its path...".<sup>23</sup> Noting that water chose the path of least resistance and wore down obstacles, once a breach had been made, he suggested that attacking infantry should follow the same method against a defense in depth. In this it was suggested that a subunit (part of a battalion) which finds or makes a breach in enemy defenses should press on and those following, should move forward behind it. In case of those who are held up, they should use their maneuver units to attack the fixed enemy from his flank and widen the breach. Once

they have overcome the opposition, they resume advance, now following those they were leading earlier. He states that this system was applicable to all units from the platoon upward.

"Taking, for example, the infantry attack: the left forward platoon of a company might find or make a gap while the right platoon was held up. It would press straight ahead, while the company commander moves towards the gap with his maneuver platoons. The held-up platoon is still engaged with the enemy resistance, when the company commander has passed through the gap. He will, therefore, send one of his maneuver platoons forward and to the right to take over the frontage of the held up platoon, and carry on the advance in its place.

If the company commander judges that the held-up platoon can destroy the enemy resistance by its own resources, he will press on at once with his remaining maneuver platoon, to back up the forward platoons.

If not, he helps the held-up platoon by a flank attack before following on.

In any case, directly the enemy has been destroyed, the check platoon would follow on as a new maneuver platoon.

The company commander would be ready to repeat this method against each successive position of the enemy, thus ensuring the relentless momentum of the torrent.

Likewise, the battalion commander may infiltrate his maneuver company through the gap made by an advancing forward company to expand the front and replace another forward company whose advance is checked or delayed.

Thus any gap will be progressively enlarged or deepened on the initiative of each successively higher commander."<sup>24</sup>

This was the exposition of a mobile attack, equally suited to the infantry or mechanized forces. In developing this theory, we see no difference between what was proposed initially, as quoted above, and explained later in the revised 1926 edition of The Framework of a Science of Infantry Tactics. In 1920, Liddell Hart had not been converted to the tank school as he was by 1926. Thus the overall applicability of

the expanding torrent method of attack is demonstrated. An effort will be made later in this thesis to show that this theory is equally applicable today.

In the same lecture, Liddell Hart also examined the tactics of infantry in defense. He spoke of the "Contracting Funnel" in defense. After having stated that the defense is only attack halted, he described how the principles of offense, reconnaissance, fixing, decisive maneuver and exploitation could equally be applied to the defense. The emphasis here was on surprise and counterattack. By suggesting an offensive form of a mobile defense, Liddell Hart reemphasized the importance of mobility. While his views on offensive action have gained popularity, his theory of mobile defense is not so well known. However, the dependence of the mobile defense on offensive action for its success, does suggest that an understanding of the mobile attack and its implementation is necessary for both defense and offense.

From the exposition of the first tenets of mobile warfare, it was a logical progression to the strategic application of his theories. He circulated a paper which was subsequently published as a book, on the subject of the indirect approach. The mobile attack could not progress unless it was launched where mobility could be brought into play. Thus attacking an enemy head on or along a line which he expected, would only serve to stiffen resistance and hence an 'indirect approach' was needed. This is now examined in the next section.

#### Section 5: THE INDIRECT APPROACH

In 1929, Liddell Hart's book on the strategy of indirect approach was published under the title of The Decisive Wars of History. However,

in later editions of the same book, he reverted to the original title, The Strategy of Indirect Approach.<sup>25</sup> The theme is that in war, as indeed in any other sphere, the line of least expectation is likely to achieve the most results. This he sought to prove by examples from history, ranging from the Grecian wars to, in the post Second World War edition, that war.

In his Memoirs, the main conclusions are summarized and requoted partially in Bond's biography.

"More and more clearly has the fact emerged that a direct approach to one's mental object, or physical objective, along the 'line of natural expectation' for the opponent, has ever tended to, and usually produced, negative results. The reason has been expressed scientifically by saying that while the strength of an enemy country lies outwardly in its numbers and resources, these are fundamentally dependent upon stability or 'equilibrium' of control, morale and supply. The former are but the flesh covering the framework of bones and ligaments.

To move along the line of natural expectation is to consolidate the opponent's equilibrium, and by stiffening it to augment his resisting power. In war as in wrestling the attempt to throw the opponent without loosening his foothold and balance can only result in self-exhaustion, increasing in disproportionate ratio to the effective strain put upon him. Victory by such a method can only be possible through an immense margin of superior strength in some form, and even so tends to lose decisiveness. In contrast, an examination of military history, not of one period but of its whole course, points to the fact that in all the decisive campaigns the dislocation of the enemy's psychological and physical balance has been the vital prelude to a successful attempt at his overthrow. This dislocation has been produced by a strategic indirect approach, intentional or fortuitous...

The art of the indirect approach can only be mastered, and its full scope appreciated, by study of and reflection upon the whole history of war. But we can at least crystallize the lessons into two simple maxims, one negative, the other positive. The first is that in the face of the overwhelming evidence of history no general is justified in launching his troops to a direct attack upon an enemy firmly in position. The second, that instead of seeking to upset the enemy's equilibrium by one's

attack, it must be upset before a real attack is, or can be successfully, launched...

Mechanized forces, by their combination of speed and flexibility, offered the means of pursuing this dual action far more effectively than any army could do in the past."<sup>26</sup>

This is strategic application of the doctrine. Yet at the end of the second edition is printed a letter written by Major General Eric Dorman Smith, on the application of the strategy of indirect approach in the North African Campaign 1940-42. The letter quotes at length the offensive application of the theory to the attack on Graziani's Italian forces in December 1940 and in particular, the attack by the 4th Indian Division on the Nibeiwa camp from the rear, indirect approach which resulted in a complete success. Similarly, Dorman Smith also quotes Auchinleck's dispositions at Alamein to prevent Rommel from getting to the Suez Canal in 1942, as an example of the application of the theory in defense. But before Rommel attacked at the end of August 1942, Auchinleck was removed and Montgomery took over command. The defeat of Rommel's thrust at Alam Halfa and subsequent defeat starting at Alamein are not relevant to this discussion, and it is true that Auchinleck's system of defense was not tested in battle. However, what is significant is that the application of Liddell Hart's theory, in this example, was wholly tactical. There will always be a tactical application to the employment of the indirect approach and this thesis will restrict itself to the tactical sphere.

The mobile attack, using the expanding torrent method, will be most effective using the indirect approach and to achieve success, will be dependent on a force comprised of all arms cooperating together. This



represents in sum Liddell Hart's doctrine. However, before the applicability of this theory to modern conditions is considered, it is essential that a detailed analysis is done. As a start, the next chapter will look at Liddell Hart's writings and analysis done by other authors. The later ones will examine applicability, before any conclusions are drawn.

## CHAPTER I NOTES

<sup>1</sup>J.F.C. Fuller, 1878-1966, has been considered by many to have been one of the most original and creative military thinkers of this century. A writer as prolific as B.H. Liddell Hart himself, Fuller sought controversy. He titled his autobiography, Memoirs of an Unconventional Soldier, (Ivor Nicholson and Watson Limited, London, 1936), and chose for its motto, if one could call it that, Herakleitos' epigram, "Asses would rather have refuse than gold".

Undoubtedly an intellectual soldier and a leading proponent of mechanized warfare, it is difficult to assess Fuller's impact on British military philosophy. When he was given an experimental brigade to command in 1927, he refused for he felt that he was being restricted. He thus lost the only chance of his career to practically applying his theories. His autobiography explains in great detail. Pages 434-440.

An assessment of Fuller has been made by A.J. Trythall in his book 'Boney' Fuller, (New Brunswick, New Jersey: Rutgers University Press, 1977). It is difficult to judge the impact of Fuller on Liddell Hart and vice versa. There was considerable correspondence between the two and their relationship had its ups and downs. In fact, their influence on each other could form a fascinating study.

<sup>2</sup>Basil Henry Liddell Hart, Memoirs, vol 1 (New York: G.P. Putnam's Sons, 1965), p. 35.

<sup>3</sup>Heinz Guderian, Panzer Leader, trans. C. Fitzgibbon (New York: Dutton, 1952), p. 20.

<sup>4</sup>Chaim Herzog, The War of Atonement (Boston: Little, Brown, 1975), p. 270.

<sup>5</sup>In his book, Strategy (New York: Praeger, 1972), Liddell Hart devotes a complete chapter (XIX), to the theory of strategy. This constitutes one of the modern interpretations of the term and suffices for purposes of this study.

<sup>6</sup>Ibid., p. 335.

<sup>7</sup>Basil Henry Liddell Hart was born in Paris on 31 October 1895, where his father was a pastor. He attended preparatory schooling in England and later joined St. Paul's. His school life was not particularly

distinguished and in October 1913, he left St. Paul's for Corpus Christi College, Cambridge. However, with the outbreak of war, he joined the Officers Training Corps and in December 1914 was gazetted as a Second Lieutenant. Details of his early life are described in his Memoirs.

<sup>8</sup>Jay Luvaas, The Education of an Army (Chicago: University of Chicago Press, 1964), Chapter II, p. 377. Luvaas was the first to analyze Liddell Hart's work in detail, outside of articles in various magazines. However, this analysis is restricted to 1940. Luvaas knew Liddell Hart and had access to his papers when writing. Analyses of Liddell Hart's works by Luvaas and others, are examined in Chapter II of this thesis.

<sup>9</sup>Brian Bond, Liddell Hart (New Brunswick, NJ: Rutgers University Press, 1977), p. 18. Bond also knew Liddell Hart intimately and describes in the Introduction (pp. 1-10) their relationship. Like Luvaas, he too had full access to Liddell Hart's papers and the book is the first, full length analysis of all of Liddell Hart's works.

<sup>10</sup>Liddell Hart, Memoirs, vol. 1, p. 34.

<sup>11</sup>The Liddell Hart - Hore Belisha partnership was not without its detractors. The former's influence was resented by those on whom the axe fell or were bypassed for advancement. David Fraser in his biography of Alanbrooke, Alanbrooke (New York: Atheneum, 1982) discusses their relationship (p. 126). Writing of Liddell Hart, he says "It was strange how this original, gifted, patriotic man, who loved the Army, who studied history and its lessons with passion and who was fearless and eloquent in advocating progress and operational innovation could err wildly when dealing with practical, organization or human aspects. Yet perhaps it is not strange. The military historian or commentator provides an indispensable road to established thinking, and holds up an often properly unflattering mirror to the establishment itself. But if he lacks all experience of actual administration he tends to propose elegant and unworkable solutions to such matters as command and organization, where pragmatism and a knowledge of the machine from inside are preferable to even the most luminous imagination."

<sup>12</sup>Bond, p. 142.

<sup>13</sup>Ibid., p. 164.

<sup>14</sup>Ibid., p. 172.

<sup>15</sup>For a discussion of Liddell Hart's influence on founders and leaders of the Israeli army, see Jac Weller, "Sir Basil Liddell Hart's Disciples of Israel," Military Review, January 1974. This brief article authoritative enough, does not fully examine the subject, but is sufficient introduction for further study.

<sup>16</sup>Liddell Hart, New Methods in Infantry Training (Cambridge: Cambridge University Press, 1918).

<sup>17</sup>The Royal United Service Institution deserves a separate mention. Founded in 1831 as The Naval and Military Library and Museum, its aim was, "...to foster the desire of useful knowledge among the members of the United Service,...". Initially the museum was its primary feature and the Institution acquired many exhibits from its sporting and naturalist members. However, by 1860, its character having become more professional, the natural history specimens were sold. The title changed over the years and in 1839 it became The United Service Institution till 1860, when the title Royal was granted and incorporated.

The Journal was started in 1857 and was to be, "a professional and scientific periodical, useful, instructive and interesting, worthy of the Institution and Services...". The Journal has today become one of the leading publications of its kind, giving scope to aspiring and established authors. Many of Liddell Hart's initial articles were published in the RUSI Journal.

Today, the Institution organizes lectures, maintains a library and publishes a quarterly journal. Its membership is open to all, subject to rules. Members receive the journal, may attend lectures and conferences, and may use the library.

For additional information on the history of the Institution, see E. Altham, "The Royal United Service Institution," RUSI Journal, Vol. 76, 1931, pp. 235-245.

<sup>18</sup>The realization of the value of tanks came after correspondence with Fuller. This conversion is dealt with at some length in Bond's biography, pp. 27-30.

<sup>19</sup>Liddell Hart, Memoirs, vol. 1, p. 90.

<sup>20</sup>*Ibid.*, p. 222.

<sup>21</sup>*Ibid.*, p. 163.

<sup>22</sup>Liddell Hart, "The 'Man-in-the-Dark' Theory of Infantry Tactics and the 'Expanding Torrent' System of Attack," RUSI Journal, February 1921, p. 2.

<sup>23</sup>*Ibid.*, p. 13.

<sup>24</sup>*Ibid.*, p. 14.

<sup>25</sup>Liddell Hart, Memoirs, vol. 1, p. 162.

<sup>26</sup>Bond, p. 162.

## CHAPTER II

### DOCTRINE ON INFANTRY TRAINING AND TACTICS

#### Section 1: INTRODUCTION

Liddell Hart was a prolific author and any study of his ideas must necessarily encompass a large selection of his works. This chapter reviews the literature studied in preparing the thesis. This includes both his own work as well as that of other analysts who commented on Liddell Hart's work. When examining the writings on a distinguished author like Liddell Hart, an immediate problem presents itself. He himself wrote so much and so well, that everything else pales before it in comparison. Added to this is the difficulty that very little has been written on Liddell Hart, though some of his theories have been criticized in some detail. The only and recent exception is the appraisal written by Brian Bond in 1977.<sup>1</sup> This is not the only problem. Liddell Hart's interests grew with the passage of years and he wrote widely on a variety of subjects in the military sphere. Thus, for the purpose of this study, it is essential to restrict this review to only those writings which bear relevance to the subject at hand, namely infantry training and tactics.

Liddell Hart has long been accepted as an advocate of mechanization and mobile warfare. The previous chapter traced the growth of his thought and writings from the time of the conclusion of the First World War till the start of the Second World War. In the post Second war period,

with mechanization having been accepted and his theories of mobile warfare proved in battle, Liddell Hart turned his attention to military history. The original work which relates to the doctrine of mobile warfare and the role of infantry, was done by Liddell Hart in the period between the two wars. This allows a convenient limiting of the scope of review to selected writings of the inter war years.

Liddell Hart wrote his memoirs in 1965.<sup>2</sup> These comprise two volumes, of which the first ends at the time when the Second World War is just about to begin. The first volume discusses at length the development of his theories and attempts to have them accepted. The volume also traces chronologically his writings on the subject of infantry training and tactics, and for that reason will be relied upon heavily in this review.

## Section 2: MOBILITY IN BATTLE

Liddell Hart's first book, Outline of the New Infantry Training, Adapted to the Use of the Volunteer Force, was published in October 1918.<sup>3</sup> This little book was written to help volunteer units in training and thus is restricted to basic drills and tactics. Examined some sixty-five years after it was written, it is notable for the analysis of infantry drills and the attempt to make these simple and comprehensive for regimental officers. The book itself is of little value in tracing Liddell Hart's development of doctrine on infantry mobility. But it is noteworthy that Liddell Hart stated here, for the first of many times, that the platoon should be the basis of all infantry training.<sup>4</sup> This differed from the prevalent view that it was the section that was the basic unit

in combat and hence all training should be based on it. The next step then was to state that from now onwards, the platoon should be the basic unit in combat.

This Liddell Hart did in the article, 'The "Ten Commandments" of the Combat Unit', published in the RUSI Journal in May 1919.<sup>5</sup> The ten commandments are related to the employment of a platoon in battle. These state how a combat unit, a platoon, should conduct itself in attack and defense. For an attack some of the rules are that the platoon should not open out till necessary, use all possible cover, and cater for protection. One principle stands out in which the author states that,

"...if the leading sections (of a platoon) are held up, the supporting sections should not reinforce them direct... but should be sent to a flank...push in reinforcements where the enemy is giving way, and not where he is holding out."<sup>6</sup>

For defense he states only one principle, "Modern defense resolves itself into the holding of a series of strong points or centres of resistance."<sup>7</sup>

This article was followed in November 1919, the same year, by 'Suggestions on the Future Development of the Combat Unit, the Tank as a Weapon of Infantry'.<sup>8</sup> In this, while stating that infantry are likely to remain the decisive arm, he suggested that tanks should form part of infantry, in much the same manner that machine guns are. The infantryman is very much to the fore when he emphatically stated,

"We need not, however, let our imaginations run riot in the manner of some popular novelists who pose as military critics, forecasting future warfare as a contest between fleets of giant ironclad landships and swarms of armoured aeroplanes, whilst they consign the ordinary infantryman to the limbo of the past."<sup>9</sup>

This is curious enough and it is difficult to decide whether it was just the enthusiasm of a young writer or that he had been put up to it by his



infantry mentors. Yet later he goes on to say that making tanks part of infantry, "...would in no way destroy the utility of the Tank Corps as a separate body...".<sup>10</sup> He concludes with two assertions, that the tank will ever increasingly become important and that infantry must be provided with greater striking power, if they are to retain their decisive role.

While it is possible to read too much into Liddell Hart's early writings, yet a gradual progression becomes apparent. From training of volunteer units where insistence was placed on the platoon as a unit of maneuver, to the subordination of tanks to the infantry including a tank with each platoon, it does become apparent that the next step should lead towards further exposition of restoring mobility on the battlefield. This he did, when he spoke at the Royal United Service Institution on 3 November 1920, about the 'Man-in-the-Dark Theory' and 'Expanding Torrent' System of Attack'.<sup>11</sup>

The theories have been explained in the previous chapter. What is of importance is the circumstances under which Liddell Hart spoke and made his assertions. It is difficult to imagine today, a young man of twenty-five years, propounding theory of tactics to an obviously older and experienced audience. But then Liddell Hart had his great supporter, Lieutenant General Sir Ivor Maxse,<sup>12</sup> not only encouraging him but taking the chair at this lecture. Second, the war that had just finished had been notable for lack of mobility in maneuver. Here was a young lecturer, one of few, suggesting how mobility could be restored to the battlefield. Critically examining what he said, it does appear that it was nothing new, except that it was put differently. What is different is the emphasis on

mobility, at a time when a search was on to restore it to its rightful place. The other point is the lucidity with which he was able to explain his theories to the audience.

The development of his ideas becomes apparent as we follow Liddell Hart's writings. From the book on infantry drills where he came to realize that the platoon should be the basic unit of combat, to suggesting that the tank should form part of a platoon and then that the 'torrent' must move on, there is a logical progression. First is the accent on reviving mobility and second, a slowly dawning realization that the former can be achieved only by using infantry and tanks together. This conclusion might appear premature because Liddell Hart in 1920, did not consider tanks in the Fuller manner.<sup>13</sup>

The 1926 revised edition of The Framework of a Science of Infantry Tactics,<sup>14</sup> shows definite shaping of the theory. The genesis of the first edition and its subsequent revision are explained at length in the Author's Preface to the third, 1926, edition. Liddell Hart had retired from the army in 1925 and was, by the time this edition was published, a free agent. This allowed him to explain matters with greater clarity than was possible earlier. He explains that this book had derived from the lecture given at the Royal United Service Institution in 1920. At that time, Liddell Hart was writing the official infantry manual, in conjunction with Brigadier General W.J. Dugan in whose brigade he was also serving as a staff officer. The official manual, subject as it was to editorial criticism and revision by the authorities, was slow in being published. Thus, the lecture of 1920 was published as a booklet in May 1921. The official manual appeared later that year, but had been revised so much that Liddell Hart's own book

still served to amplify the official manual and a second edition was published. Meanwhile, the official "Infantry Training", was revised more to Liddell Hart's liking and republished in 1926. Still the third revised edition was published to help officers engaged in training or studying for promotion examinations.

The author, in the preface, also explains the additional revisions. The reasons for these make interesting reading. Besides making the book "fuller yet simpler", he states that certain drawbacks that he had observed in training were repetitive enough to require suggestion of a common solution. Among these are, that there was lack of cooperation, that infantry mobility was still hampered by trench warfare mentality, and that infantry commanders were not making use of their reserves to exploit success. The three points mentioned here are the very ones that he had been at pains to emphasize in all his writings so far.

Additionally, by this time, Liddell Hart had been in touch with J.F.C. Fuller and considerable exchange of ideas had taken place.<sup>15</sup> Further in the preface, the author says,

"...this book deals with infantry tactics. The proportionate values and strength of the other arms and their relationship to the action of infantry are, in all armies, for the present in a state of flux. ...in its broad aspect the cooperation of infantry with these arms consists of taking instant advantage of all opportunities provided by the action of tanks, artillery, aircraft, in order to destroy and clear away from their path the enemy infantry...

It is probable that infantry will eventually be absorbed into tank forces. This at any rate is the view of the French authorities, as expressed by the late General Buat, post-war Chief of the General Staff - a view developed even earlier and more explicitly in this country by that brilliant military thinker, Colonel Fuller.

But until this eventuality comes to pass and so long as infantry exist in their present form, it is surely essential that their tactics should have a scientific basis drawn from the fundamental principles of combat,...".<sup>16</sup>

The book itself explains in greater detail the same points that were made earlier. Starting from the principles of war and explaining them and their relationship to each other, Liddell Hart leads on to his 'Man-in-the-Dark' theory from which he deduces what he calls the governing principles of protective formation, reconnaissance, fixing, decisive maneuver and exploitation. These were then applied to battle, both in attack and in defense. The former led to the 'Expanding Torrent Method'. In defense, he explained the 'Contracting Funnel' system. The book is notable for simplicity of its explanation and an unusual attention to detail. Reading it, it is easy to understand the success various editions achieved and the readership that the author acquired.

The next contribution by Liddell Hart, relevant to this study, is the one that he is most known for, that is the 'Strategy of Indirect Approach', which was published in 1929 under the title, The Decisive Wars of History. This is generally considered to be Liddell Hart's major contribution to modern military thought and has been analyzed at length.<sup>17</sup> An explanation of the theory has already been made in the previous chapter. Since this study is concerned with only the tactical application of the theory, only relevant extracts will be referred to.

In a brief yet separate chapter entitled, 'The Concentrated Essence of Strategy and Tactics', Liddell Hart attempts "...to epitomize, from the history of war, a few truths of experience which seem so universal and so fundamental, as to be termed axioms".<sup>18</sup> These are

interesting because they are the distilled 'essence' of his military philosophy. They are quoted below and will be applied in a later chapter to examine their relevance to modern tactics.

"...They apply to tactics as well as strategy, unless otherwise indicated.

1. Adjust your ends to your means.
2. Keep your object always in mind, while adapting your plan to circumstances.
3. Choose the line (or course) of least expectation.
4. Exploit the line of least resistance. (In tactics this maxim applies to the use of your reserves; ...)
5. Take a line of operation which offers alternative objectives.
6. Ensure that both plan and dispositions are flexible - adaptable to circumstances.
7. Do not throw your weight into a stroke whilst your opponent is on guard.
8. Do not renew an attack along the same line (or in the same form) after it has once failed. ..."

Liddell Hart's theories and doctrine about infantry training and tactics were summarized in a lecture on the 'Future of Infantry' that he gave to the officers of the Southern Command in Tidworth in 1932 and published as a book in 1933.<sup>19</sup> This book had an appreciative readership around the world and is remarkable because of much of what he wrote then is applicable, even today.

The first part of the book deals with the development of infantry from the Grecian times. This he did because he felt, rightly, that characteristics and limitations of infantry have their roots in the past. He goes on further to explain that the true role of infantry has been to create disorganization which in turn can be exploited by the mounted arm.

"Infantry have only been decisive in battle in exceptional circumstances. Such circumstances arise when the rate and possibility of tactical movement on both sides is restricted by external conditions, which hinder the disorganized side from rallying or moving reserves. Wood-fighting and hill-fighting are examples..."

He argues that infantry has never been, "the decisive arm, in the sense that cavalry has been, it has often had a great part to play as the creator of opportunity and of victory, as the means of preparing and making possible a decision".<sup>20</sup>

What Liddell Hart did say was, that

"Infantry has had the fixing role. This comprises two degrees - according to the ability of the infantry. The lower degree may be defined as the power 'to hold' - whether in occupying a position or the enemy's attention. It is essentially a protective or defensive power, providing the mobile arm with a stable base from which it can operate. The higher degree may be defined as the power to 'disorganize'. It may be attained by a demoralizingly effective fire, by penetration of weak spots in the opponent's front, and by menacing his rear. It is definitely an offensive power, and implies a real tactical mobility on the part of the infantry, ...

Infantry, even the best light infantry, cannot replace the need for a modernized cavalry because they cannot strike quick enough or follow through soon enough for decisiveness in battle. The only condition on which they could do so is if they took the form of a mounted infantry..."<sup>21</sup>

These quotations at first sight might appear to negate the importance of infantry. Interpretation can also be made, that no operations were possible without infantry, whichever role they were used in. Accepting that in restricted terrain, infantry would be decisive, he went on to plead for mounted infantry. Today we accept mechanized infantry as a matter of course. The other point is that the experience of the Second World War showed efficacy of tanks and infantry operating together. In 1933, this was not as apparent as it now seems.

Liddell Hart devoted the subsequent part of the lecture to how the infantry may be modernized; the weapon, a self loading rifle, the weight factor, clothing and equipment and finally, transport. For tactics, he proposes the expanding torrent method of attack. A lot of this discussion is technical in nature and related to detail. This ability to attend to detail while discussing theory and combine theory and practice, is a Liddell Hart specialty and remained the bane of some of his critics. Last, he suggested that infantry leaders read, it is not only the body but also the mind that must be trained.

Needless to say, this book received the attention it deserved. Even today the problems of the infantry remain the same, though in a highly developed technological environment. But the role of infantry remains essentially as Liddell Hart spelled out some fifty years ago and the same factors need emphasis and correction.

So far, the thread of progress has been drawn, of Liddell Hart's ideas on infantry training and tactics, from the time he wrote for the volunteers, through his exposition of the expanding torrent method of attack, to finally the strategy of the indirect approach and statement of the basic axioms. In doing so, references have been restricted to only those writings of Liddell Hart which have a bearing on this study. If by this an impression has been created that his output was limited to only that which has been mentioned, it would be incorrect. From the time Liddell Hart became the military correspondent of the Daily Telegraph in 1925, he wrote prolifically. Most of his journalistic writings were subsequently incorporated in books, which now came along in a steady stream. To give some idea of the volume of his output,<sup>22</sup> it is interesting to

note that, Paris or the Future of War was published in 1925, a biography of Scipio Africanus in 1926, Great Captains Unveiled in 1927, a biography of Sherman in 1929 and then The Decisive Wars of History. All these books were interspersed with newspaper articles, other writings, lectures and a voluminous correspondence.

Whatever have been the criticisms of Liddell Hart's theories, one factor stands out, and that is the lucidity of his writing. Reviewing Liddell Hart's Memoirs, Michael Howard said, "...His place in history is secure; not, as he might have wished, as the reformer of the British Army, but as the man who, more than any other in this century, has shown us how to think clearly and sanely about war...".<sup>23</sup>

### Section 3: LIDDELL HART BY OTHERS

Liddell Hart's writing career can be divided into two compartments for the purpose of study. The first being the period between the two world wars, where is seen the young writer, progressive, pressing for a change and in the latter period after the Second World War, as the theorist vindicated and a senior adviser. The division is not as artificial as it may seem, because in the first period there was little evaluation though considerable criticism of his ideas. In the second, the emphasis changes with more evaluation and balanced criticism.

In this section, the discussion will be restricted to writings on Liddell Hart which mainly attempt evaluation and are conveniently enough, in the second period. The criticism is analyzed at length by Brian Bond in his book on Liddell Hart<sup>24</sup> and also by Robin Higham in his chapter on Liddell Hart.<sup>25</sup> Since the earlier criticism is not relevant to the subject at hand, it is not discussed at this stage.



The first attempt at evaluation of Liddell Hart's work was done in a chapter entitled, 'Maginot and Liddell Hart: The Doctrine of Defense', in Makers of Modern Strategy edited by E.M. Earle and written in 1943.<sup>26</sup> The article is written by Professor A. Kovacs, writing under the pseudonym Irving M. Gibson. At first glance, the heading of the chapter makes it appear that there was some connection between the Maginot concept and Liddell Hart. The article deals with Liddell Hart's influence on the British commitment at the start of the Second World War. For that reason it is outside the scope of this study to examine. However, it is interesting to note that later, Higham called it, "...a bad article."<sup>27</sup>

In 1952, Colonel Robert J. Icks of the U.S. Army wrote in the Armor<sup>28</sup> magazine on Liddell Hart. This brief article summarizes Liddell Hart's career till that time. It also touches upon his major works, but is restricted in evaluation. One criticism which also surfaces in another authors' works later, is that Liddell Hart tended to be repetitive and lengthy. On the whole, this article is a good overview of Liddell Hart's work. The next evaluation appeared in the Military Review in 1954 in an article by Lieutenant (j.g.) John W. Walden of the U.S. Navy.<sup>29</sup> This is a longer work than that of Colonel Icks. It deals with Liddell Hart's personal background, his ideas on strategy, including the Indirect Approach, and reproduces the axioms described in the previous section of this study. Further, Walden states what he thinks was Liddell Hart's contribution to the reorganization of the British Army under Hore-Belisha, doctrine on mobility and its application by the Germans. The author also makes an evaluation of criticism of Liddell Hart, supporting his doctrine of defense, and the relationship between defense and offense. Walden's defense of

Liddell Hart's theories is extremely able and he concludes that, "Liddell Hart's writings have already found their place in military history as has been proved by the words of great men the world over."<sup>30</sup> Undoubtedly the article is a good assessment of Liddell Hart.

The first full length assessment of Liddell Hart appeared in The Education of an Army, British Military Thought, 1815-1940, by Jay Luvaas in 1964, in a chapter entitled, 'The Captain Who Teaches Generals'.<sup>31</sup> Unlike the two articles reviewed so far, this study is replete with notes and contains a limited bibliography. Professor Luvaas traces the growth of Liddell Hart's theories through his writings, which are examined in considerable detail. He had access to Liddell Hart's personal papers and thus was the first to bring a different perspective to the evaluation carried out. Passing on from earlier writings on infantry tactics to Liddell Hart's contributions as military correspondent of first, the Daily Telegraph and later the Times, Luvaas devotes considerable space to the progress of Liddell Hart's ideas, his diligence in research and correspondence. The author takes into account the criticisms made and examines Liddell Hart's contribution in the realm of military thought. He also assesses Liddell Hart's influence upon the British Army and individuals. He concludes,

"Looking at his creative contributions as theorist, military correspondent, historian and reformer, and especially in view of the impact that his works has had upon the twentieth century revolution in warfare, surely the time has come to recognize the greatness of Liddell Hart."<sup>32</sup>

The next assessment came in a book by Robin Higham, The Military Intellectuals in Britain: 1918-1939.<sup>33</sup> In a chapter on 'The Advocates of Mechanized Landpower', Higham discusses both J.F.C. Fuller and Liddell

Hart. Very much on the Luvaas pattern, Higham traces the growth of Liddell Hart's ideas and examines his contribution to military thought. This work contains exhaustive notes, a detailed bibliography of Liddell Hart's works and a separate section on evaluation of his contribution. As also with Luvaas, Higham had access to Liddell Hart's papers, which lends authenticity to his writing. Additionally, Higham's style is incisive which makes attractive reading. However, both Luvaas and Higham, though they have documented in detail Liddell Hart's works and progress, have not evaluated them as fully as might be desired. This was subsequently done by Brian Bond in his appraisal of Liddell Hart, published in 1977.

Bond, like Luvaas and Higham, was well acquainted with Liddell Hart and in the introduction to the book explains his relationship with his subject as friend and mentor. It touches the biographical content only to put into context, the development of Liddell Hart's military thought.<sup>34</sup> It is explained that it is too soon for a definitive biography to be written. Interestingly enough, the author states

"...this study makes no claim to be either comprehensive or exhaustive. What it does do is blaze a trail through the vast, and in some important areas virtually unexplored, forest of the Liddell Hart Papers...To keep up...(the) early metaphor, this study will perform a useful service if it opens up new areas of forest to other scholars."<sup>35</sup>

It has been the experience of this researcher that all writings about Liddell Hart have tended to concentrate on the development and application of his doctrines as a whole. Indeed the work of Luvaas, Higham and now, Bond, is no doubt analysis of the right kind. But it is possible and necessary, that each of Liddell Hart's writings on particular subjects, such as infantry tactics, army reorganization or history,

should be studied and assessed, not only for a study of the individual but for the application of his theories to contemporary situations.

Bond has divided his book into nine chapters, excluding the Introduction and Conclusion. The opening chapter deals with Liddell Hart's background and early years. It touches upon very briefly, the expanding torrent method of attack and then goes on to discuss Fuller's influence upon Liddell Hart and the latter's conversion to tanks, including the inquiry, "...may I ask what are the possibilities of a transfer to the Tank Corps?".<sup>36</sup> The second chapter deals with the Strategy of Indirect Approach. Bond traces the formulation of this theory through correspondence and writings. It also takes into account criticisms made by Liddell Hart's contemporaries, particularly, Scammel, Wilkinson, Fuller and others and recounts the recognition that Liddell Hart received.

At the beginning of the Nineteen-Thirties, Liddell Hart had made a name for himself as a military correspondent and a theorist. Chapter three deals with, 'The British Way in Warfare' and the suggestion that rather than send land troops to the continent of Europe, British participation in a future war should be biased towards establishing naval supremacy, for that had been Britain's traditional strategy. Liddell Hart has been criticized at length on this thesis and Bond covers the subject in detail. Liddell Hart's subsequent disenchantment with the army staff also began at this time and is also covered in chapter three. The next chapter is entitled 'Limited Liability 1935-39'. It was during this period that Liddell Hart had reached the zenith of his pre-war career. This was the period of his association and subsequent divergence from Hore-Belisha, resignation from the Times and at the commencement of

the war, reduction to the role of a bystander. A rise to the peak and almost immediate downward incline. Bond assesses the criticism of Liddell Hart and agrees finally with Michael Howard's view that, "... (his) eclipse was not undeserved".<sup>37</sup> However, there is no discussion of Liddell Hart's efforts for mechanization of the army and his role related to the development of the doctrine of mobility.

Chapter five deals with the period of the Second World War and the next chapter with the immediate post-war years. In the first period, Liddell Hart held no official position and was limited to commenting in a personal capacity. In the latter, his prestige rose and he was more in the public eye. It is in the latter chapter that Bond discusses two issues, first, Liddell Hart's adjustment as a military theorist to the introduction of atomic weapons and the second, his opposition of war crimes trials of Germany's leaders. Chapter seven introduces Liddell Hart's thoughts on nuclear deterrence and on guerrilla warfare. The last two chapters deal with his influence on the German generals and on Israeli military theory and practice.

Brian Bond's knowledge of his subject is vast and authoritative. Additionally, he has a facile manner of writing which makes reading easy. In his assessment of Liddell Hart, he has been more than fair to the criticism made against his subject, yet Liddell Hart benefits and our opinion of the man improves. The study is objective and in any future appraisals of Liddell Hart, must form the starting point. However, as Bond himself has written, there is far more analysis required before the last word can be claimed to have been written.

## CHAPTER II NOTES

<sup>1</sup>Brian Bond, Liddell Hart (New Brunswick, NJ: Rutgers University Press, 1977).

<sup>2</sup>Liddell Hart, Memoirs (New York: G.P. Putnam's Sons, 1965).

<sup>3</sup>Liddell Hart, New Methods in Infantry Training (Cambridge: Cambridge University Press, 1918).

<sup>4</sup>Ibid., p. 2.

<sup>5</sup>Liddell Hart, "The 'Ten Commandments' of the Combat Unit", RUSI Journal (May 1919).

<sup>6</sup>Ibid., p. 291.

<sup>7</sup>Ibid., p. 292.

<sup>8</sup>Liddell Hart, "Suggestions on the Future Development of the Combat Unit. The Tank as a Weapon of Infantry", RUSI Journal (November 1919).

<sup>9</sup>Ibid., p. 666.

<sup>10</sup>Ibid., p. 667.

<sup>11</sup>Liddell Hart, "The 'Man-in-the-Dark' Theory of Infantry Tactics and the 'Expanding Torrent' System of Attack", RUSI Journal (February 1921).

<sup>12</sup>General Sir Frederick Ivor Maxse (1862-1958), saw service in his younger days in the Sudan (1898-99) and in South Africa (1899-1901). During the First World War, he first commanded a brigade and subsequently a division. In 1917, he took over 18th Corps and led it in the Passchendaele campaign from July to November of that year. He was known as a trainer and was unusually progressive in his ideas as a soldier. He was among the first British commanders to recognize the merit of the German infiltration method of attack. In April 1918, he became Inspector General of Training in France and in 1919, commanded the Northern Command in England.

As an open minded soldier, he took notice of Liddell Hart's writings and assigned him to write the new Infantry Training manual, along with Brigadier Dugan. Maxse became a full General in 1923 and retired in 1926. His influence on the British Army lay in the field of training, particularly during the First World War. However, this was but shortlived. Today, he is remembered more for his encouragement of Liddell Hart in the latter's formative days. For further details, see Correlli Barnett's entry on Maxse, Dictionary of National Biography 1951-1960 (London: Oxford University Press, 1971), pp. 727-728.

<sup>13</sup>The realization of the value of tanks came after correspondence with Fuller. This conversion is dealt with at some length in Bond's biography, pp. 27-30.

<sup>14</sup>Liddell Hart, The Framework of a Science of Infantry Tactics (Revised Ed.) (London: Clowes, 1926).

<sup>15</sup>The Fuller-Liddell Hart correspondence has been briefly referred to in the last chapter. Bond describes their relationship in detail.

<sup>16</sup>*Ibid.*, pp. xv-xvi.

<sup>17</sup>Every assessment made of Liddell Hart's writings considers this. Work of writers such as Jay Luvaas and Robin Higham are discussed in the next section.

<sup>18</sup>Liddell Hart, Strategy (New York: Praeger, 1972), pp. 348-349.

<sup>19</sup>Liddell Hart, The Future of Infantry (London: Faber, 1933 and Harrisburg, PA: Military Service Publishing Co.).

<sup>20</sup>*Ibid.*, p. 33.

<sup>21</sup>*Ibid.*, pp. 34 and 37.

<sup>22</sup>Robin Higham, The Military Intellectuals in Britain 1918-1939 (New Brunswick, NJ: Rutgers University Press, 1966), p. 48.

<sup>23</sup>Michael Howard, "The Liddell Hart Memoirs", RUSI Journal (February 1966), p. 61.

<sup>24</sup>Bond.

<sup>25</sup>Higham, pp. 82-116.

<sup>26</sup>E.M. Earle, ed., Makers of Modern Strategy, Military Thought from Machiavelli to Hitler (Princeton, NJ: Princeton University Press, 1943).

<sup>27</sup>Higham, p. 47 (notes). This article represents a popular misconception of the time, that Liddell Hart was connected with the defensive policies, which ultimately led to Dunkirk (Luvaas, p. 44 and notes). Kovacs wrote this article under a pseudonym to protect his family, who were still living in Czechoslovakia at that time. Liddell Hart objected to the piece and wrote to the editor, Professor Earle, stating his arguments in a point by point reply. He also pointed out certain factual mistakes. Kovacs replied and in turn evoked yet another lengthy reply from Liddell Hart. Luvaas deals with Liddell Hart's connection with the doctrine of supremacy of defense and how the Allies failed to act upon the antidote suggested by him, sending a force of armored divisions to form a strategic mobile reserve. The correspondence between Liddell Hart and Kovacs, through Earle, remains an academic record and is held by the University of London King's College.

<sup>28</sup>Robert J. Icks, "Liddell Hart: One View", Armor (November-December 1952).

<sup>29</sup>John W. Walden, "Liddell Hart", Military Review (September 1954).

<sup>30</sup>*Ibid.*, p. 45.

<sup>31</sup>Jay Luvaas, The Education of an Army, British Military Thought, 1815-1940 (Chicago: University of Chicago Press, 1964).

<sup>32</sup>*Ibid.*, p. 424.

<sup>33</sup>Higham, pp. 67-116.

<sup>34</sup>Bond, p. 4.

<sup>35</sup>*Ibid.*, p. 4.

<sup>36</sup>*Ibid.*, p. 29.

<sup>37</sup>*Ibid.*, p. 115.



## CHAPTER III

### INFANTRY MOBILITY

#### Section I: INTRODUCTION

Liddell Hart's theories on infantry tactics have a basic nature which allows common applicability, in very much the same manner as do the principles of war. A criticism made of the principles of war is that neither the principles themselves nor their explanation are universally accepted.<sup>1</sup> However, there is a theoretical base to these principles which cannot be ignored. Similarly with Liddell Hart's doctrine, there is a common theoretic base which a practitioner of mobile war must take into account.

Liddell Hart's contribution to military thought has been in many fields. Chiefly among them, strategy, military history and in the period between the two world wars, reorganization of the British Army. It is natural that in the larger implications of these subjects, his technical writings on infantry tactics, written in the early twenties, have not received the attention they deserve. A popular point of view is that in view of the technological changes that have taken place, the manner of applying these theories has changed. This observation, correct in a limited fashion, ignores the theoretical base of Liddell Hart's doctrine.

The doctrine on infantry tactics can be divided into four headings. These are, the expanding torrent method of attack, the tactical application of the indirect approach, mechanization of infantry and the combined

arms concept. All these theories stemmed from Liddell Hart's experience of the First World War and subsequent study including interaction with people like Fuller. A war like the First War was not likely to occur again, a fact that was becoming apparent to not only Liddell Hart and Fuller, but others who were studying mechanized warfare. Thus, the applicability of these theories to modern war was stressed, even prior to the Second World War. Later, the Germans, using tanks, infantry, artillery and air, together proved the applicability beyond doubt.

Last, there has been little criticism of Liddell Hart's theories of infantry tactics, both at the time of publication and subsequently. This is a void that the researcher must try to fill and is done by analysis of the expanding torrent and the indirect approach theories. The analysis takes into account the available criticism of these theories and tests their applicability in modern conditions by means of a case study. The case chosen is the Sino-Indian border conflict of 1962, fought in conditions under which most people would imagine that tenets of mobility cannot be applied. Mechanization of infantry, on the other hand, has been accepted and needs no discussion. However, the combined arms concept is examined in a later chapter.

## Section 2: ANALYSIS OF THE EXPANDING TORRENT THEORY

Liddell Hart shows considerable amount of repetition in his writings. The expanding torrent method of attack, he explained in a lecture to the Royal United Service Institution, included in the book, The Framework of Science of Infantry Tactics, later in an article in the Royal Engineers Journal and several other places. This was what he

preached and was known for. Recapitulating very briefly, the expanding torrent stated that in an attack, any unit or subunit (part of a battalion), which finds or makes a breach in enemy defenses, should move forward. Those following, should move ahead in those areas where the breach has been made. Units or subunits which are held up, should overcome the opposition holding them up by using their integral maneuver elements and then resume the advance, now following those they were leading. Thus an attack would never stop and keep rolling forward.

The earliest criticism came from Fuller,<sup>2</sup> who typically suggested that the proposed tactics would not work against an enemy with tanks. Liddell Hart's subsequent conversion to the view point of the predominance of tanks in the future, is testimony that the criticism was accepted. The theory accordingly was later expanded to include the use of tanks. But before that happened, a more stringent criticism appeared. This took place in an article entitled, "The Tactical Theories of Captain Liddell Hart (A Criticism)" by Brevet Lieutenant Colonel L.V. Bond of the Royal Engineers.<sup>3</sup> It is quoted not so much for its intemperate tone as for being able to develop the progress of criticism from the irrational to the practical.

Lieutenant Colonel Bond's disagreement with Liddell Hart's theory is wide. He can find nothing right with it and the premises upon which he criticizes are interesting. First, he says, Liddell Hart ignores the human factor. According to him, any tactical system must cater for the 'racial' (national) characteristics of the people, thus what would suit the English, need not necessarily suit the French or the colonials. Then theory must cater for different theaters, armament and the fighting

methods of the adversary. He takes exception to the jargon used by the author and his choice of similes, particularly, the expanding torrent. There is a humorous piece as to how this theory could equally have been called 'the rising tide' or 'the rotary brush'. The lessons of the war are, according to him, "...the psychology of our soldiers, the material and moral effect of the existing weapons in various circumstances, the necessity at all times of thinking objectively...". Further, Liddell Hart's theory can succeed, only under the following conditions,<sup>4</sup>

- "(a) an enemy in widely separated and distinct posts;
- (b) a perfect knowledge of the position of these posts;
- (c) leaders who can be relied upon to take correct tactical decisions;
- (d) no time table to adhere to, as with a barrage;
- (e) troops under complete control and ready and willing to attack a series of objectives.
- (f) a passive enemy."

The reply to this criticism, as can well be imagined, was swift and published in November of the same year.<sup>5</sup> Liddell Hart replied, taking each argument paragraph and without recourse to invective.<sup>6</sup> He answers that he has indeed not overlooked the human factor, though he finds it hard to accept differences in racial characteristics making any impact, as well as the effect of different environs. He demolishes the argument about the theory being called by any other flippant name. However, his reply to Colonel Bond's suggestion that the theory can work under only certain conditions is worth reproducing, because besides defending the theory, characteristically, it shows the simple and irrefutable logic that Liddell Hart brought to bear in his work.

- (a) An enemy in separated and distinct posts. - I suggest that the machine-gun and light automatic, and the grouping tendency, which has always been inherent in human nature, will cause these to be normal in any system of defense in depth - to counter which is the purpose of the "E.T." (sic) method.
- (b) A perfect knowledge of the position of these posts. - The "E.T." method is based on the fact that the exact points at which resistance will occur cannot be anticipated, and that a method is needed which will allow of adjustment to the degree of resistance at any particular spot. The platoon leap-frogging method, which Colonel appears to favor, does, on the other hand, demand exact knowledge of the enemy defense posts.
- (c) Leaders who can be relied upon to take correct tactical decisions. - I agree that modern war has no use for stupid leaders. We must be ruthless in selection and persevering in training. ...
- (d) No time-table to adhere to, as with a barrage. My training theories are not based on a recurrence of trench warfare. I again refer Colonel Bond to his quotation of Mr. Winston Churchill.
- (e) Troops under complete control, and ready and willing to attack a series of objectives. - See my answer to question 7, for the first part. For the second part, I would point out that the men will start the attack with but one objective impressed on them - to gain the battalion objective.
- (f) A passive enemy. - Surely the experience of the war proved that the danger of temporarily exposed flanks in the case of platoons and companies was overrated. On the Somme, in July 1916, I can even remember a whole brigade having both flanks in the air for forty-eight hours, during and after an attack, without accident. Moreover, the "E.T." system has the specific advantage of covering the flanks of a forward unit which is able to progress, with the least possible delay. Moreover, by means of it, an enemy counter attack against an exposed flank will itself be taken in the flank.<sup>7</sup>

Liddell Hart carries on in this vein. It is interesting to note that the reply is longer than the critical article. He also quotes instances to show acceptance his theory has had, both in the British Empire and in the United States. He argues an impressive case.

Another criticism of the Expanding Torrent theory, comparatively recent, is that Liddell Hart had copied it from the German infiltration tactics of 1918, also sometimes called 'Hutier tactics'<sup>8</sup> or 'Soft spot tactics'. Liddell Hart himself has written that his theory was different to the German infiltration tactics,

"...I came to see that the methods developed in 1918, first by the Germans and then by the Allies, did not produce the continuity of pressure and internal flank leverages necessary to penetrate a defense distributed in depth quickly enough to forestall the defender's recovery. The new infiltration tactics had sufficed for the penetration of a single position, but did not ensure that the momentum of the advance was maintained right through the whole of the enemy's system of defense, which might be miles deep. This was the problem which both sides had failed to solve during the war, even in its final stages. (He called his method, the expanding torrent.)... Some years later, when I read Sun Tzu's two thousand year old book on The Art of War, I found that he had used a close simile."<sup>9</sup>

How exactly the author developed his theory, what influenced him and from where he drew inspiration, it is difficult to document. In his study of German tactical doctrine of that war, Lupfer traces the influence of the Laffargue pamphlet on the development of the infiltration tactics.<sup>10</sup> Liddell Hart has written that the genesis of his idea developed in writing the Attack chapter of the new infantry training manual that he was writing in 1920 in conjunction with Brigadier Dugan, and he drafted this and some other chapters between July and September of that year. It is not known whether the authors paid much attention to German doctrine and experience in the war that had just finished. However, later reference does make it appear that it had been considered. Interestingly enough, an anonymous article<sup>11</sup> in the August 1919 issue of the RUSI Journal discusses infantry tactics of the 1914-1918 period. In this, the unknown author describes the leap-frog system of attack that was adopted by the

Allies. The principle of this type of attack being that each assaulting echelon attack only their own objective, clear and hold it, while subsequent echelons pass through to assault depth objectives, and so the attack carries on. Fuller's Plan 1919 would also point towards the type of attack that Liddell Hart had in mind.

Rather than belabour the point about Liddell Hart's originality in expounding the Expanding Torrent method of attack, we can presume, in the light of his account in his memoirs that he was aware of what others had done. Next, experience shows that no tactical doctrine grows in a vacuum. A climate exists which generates discussion, pros and cons are considered and finally a solution is arrived at, which in turn is revised as time progresses. This is what Liddell Hart appears to have achieved. Even before he was involved in writing the official Infantry Training Manual, he had been writing on training and tactics. Additionally, he must have discussed the matter, not only with the co-author of the manual being revised, but others with whom he came in contact. This does not, however, detract from Liddell Hart's contribution and it is pertinent that none of his contemporaries or later analysts have challenged his originality as the sole author of the Expanding Torrent method of attack.

The application of a tactical theory to practical experience is always governed by local conditions. The method of attack suggested by Liddell Hart was at best a doctrine or an idea. Its generality and avoidance of the specific makes for its universality. To test its application, it is necessary to look for historical examples. This method was adopted by the United States Army Infantry Journal, in their book, Infantry in Battle.<sup>12</sup> In a chapter on 'Soft Spot Tactics', the authors equate

infiltration tactics and the expanding torrent method of attack to deduce the axiom that in an attack, reserves should be used to exploit success and not reinforce failure. The equation between the two methods need not concern us. The authors use three examples from the First World War to illustrate the efficacy of the deduced axiom. These examples are, the attack of the French 12th Infantry on October 12, 1918, south of Seboncourt; the attack of the British 1st Division on September 25, 1915 in the battle of Loos, west of Hulluch and finally, the attack of the French 42nd Division on August 8, 1918 near Bois de Moreuil.

The examples show how the passing of reserves through a gap turned the flank of the defenders. The difference between what Liddell Hart had really suggested and the examples is that the aim of the 'expanding torrent' was to carry on relentlessly in the same manner till the whole line breached. This never took place. In the absence of the examples of the Second World War, which was yet to take place, the limited view of the authors of this method of attack, to only the objective in hand, is understandable. The commonest example of the Second World War is the German attack in the west, which was halted only at the sea. But then by this time, it was not just an infantry attack, but a combination of tanks, infantry, artillery and air, that made this method of attack possible.

The basic premises including the one that local conditions will dictate application still hold good. This leads to a battlefield environment, at one end of the scale represented by the high technology dominated European scene and at the other end, by low technology infantry dominant areas represented by the less developed countries. In between fall other examples. For the purpose of this argument we can attempt to judge applicability at both ends of the spectrum and draw general conclusions.



The latest official doctrine for war of the United States Army is explained in the August 1982 edition of Field Manual 100-5, Operations. It states the components of dynamics of battle and lists 'maneuver'<sup>13</sup> as first among these. Later, noting the imperatives of modern combat, one of them is mentioned as, "move fast, strike hard and finish rapidly."<sup>14</sup> The accent on mobility on the battlefield is unmistakable. In the high technology environment described earlier, the success of an attack will depend upon the ability of a force to finish the task in hand. Put in a different way, this means that once an offensive action is started, it will terminate successfully only when the final objective, at whatever level, is achieved. There will not be a chance to pause, regroup and take stock. This relentless action will only be possible by exploiting whatever success has been achieved. This is only stating the 'expanding torrent' differently.

In recent times, Field Marshal Lord Carver has stated that the expanding torrent theory of Liddell Hart was neither practical nor applied by any of the commanders in the Second World War, despite contrary claims.<sup>15</sup> He lays stress on the fact that Liddell Hart suggested that as the penetration takes place, the attacking force should disperse - the torrent expanding - and this was the weakness of the method. He goes on to quote examples of battles fought by Guderian, Rommel, Montgomery and Patton, to show that but for adaptation these commanders would not have succeeded. For example, by using tanks, artillery, infantry and air, all together, the Germans developed the expanding torrent theory. What these commanders practiced was theory adapted to suit their particular circumstances. However, the expanding torrent method of attack is notable for its essentials,

the need for rapid and relentless action, exploitation, use of reserves at the point of success and finally, no ceasing of action till the final objective is gained. If we were to search for these in the actions of Guderian, Rommel or Patton, they exist. They are equally applicable today, as Field Manual 100-5 points out.

Having examined the applicability of the expanding torrent theory in modern conditions, there is a need to view the same theory at the other end of the spectrum and relate it to purely infantry operations, as might take place in an area where the communications are undeveloped and the belligerents lack modern technology or are unwilling to use it. One can imagine purely infantry operations in the mountainous regions of Asia. Here progress of operations will not be as rapid, but will still depend on the two basic factors of time and space. The side that makes a bid for both space and time, by unceasing action, however difficult the circumstances, will win. Thus, wherever an attack needs to be carried to its successful conclusion, the expanding torrent method of attack can be applied. Simply, by pushing on where there is success, to the ultimate end and ever widening the breach, the final objective can be gained. However, to judge this on its own, limits the perspective. The next section analyzes the tactical application of 'the indirect approach' and then will study the application of both these theories, by means of a case study.

### Section 3: ANALYSIS OF THE INDIRECT APPROACH

The theory of indirect approach states that in war, as indeed in any other sphere, the line of least expectation is likely to achieve the

most results. Also, the fundamental axioms deduced by Liddell Hart have been quoted in the previous chapter. It is possible to test these theories by applying them to a case study. The case chosen is a small infantry campaign that took place in 1962, in the upper reaches of the Himalayas. This refers to the Sino-Indian border conflict that took place in October and November of that year. The choice of this particular campaign needs explanation. First and foremost, this was a purely infantry battle with limited artillery support on both sides. Tanks were precluded by the nature of the terrain and by a tacit agreement, both sides abjured the use of their air forces. Thus it is possible to test Liddell Hart's theories to purely infantry operations and also do it in the context of applying them to terrain where mobility is restricted to the ability of the men to march. However, before any analysis is done, a description of the campaign including that of the geography of the area is necessary.

The Sino-Indian border extends from the junction of Kashmir-Sinkiang border in the west to the trijunction of Assam, Burma and Sinkiang borders in the east. The border is some 2,500 miles long but is not continuous. The mountain kingdoms of Nepal and Bhutan share a border with both India and China for parts of the length in the eastern region. The contested regions were in the Aksai Chin area, bordering the Ladakh district in the North and what was then (and still so, colloquially) called NEFA, or North East Frontier Agency. The border had not been effectively surveyed nor delineated during British rule in India, partly because the British held undisputed sway in the region. After India's independence, the Sino-Indian border slowly became a contentious issue between the two countries. The first border incident took place in 1959, when an Indian

border post was evicted by the Chinese in the Longju area. However, this was played down by both the countries. By 1962, the issue had received considerable attention on both sides and the stage was set for a show of arms.<sup>16</sup>

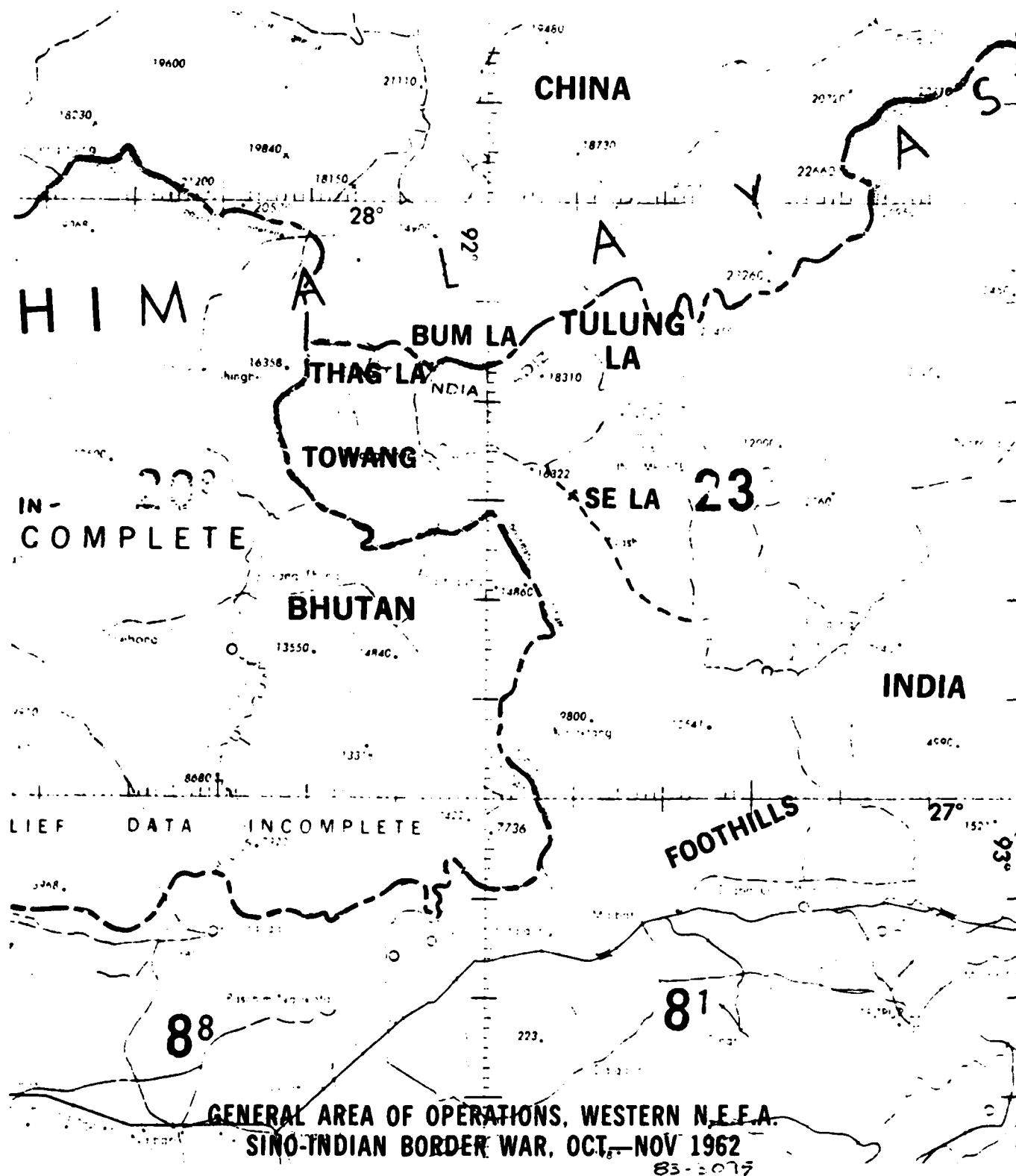
The terrain in the Ladakh region, bordering Aksai Chin is arid. Ladakh is a district of Kashmir, with an average height of over 11,000 feet. The average height of the peaks is between 18-19,000 feet. It lies on the leeward side of the Himalayan range and receives only some three inches of rainfall in a year. On the other hand, NEFA, approximately one thousand miles to the east, has similar heights but is tropical with thick jungles. The tree line in this area ends at 12,000 feet. In 1962, fighting took place in both the regions. However, it is the fighting in NEFA where maximum Chinese gains were made and hence the discussion will be restricted to that sector.

NEFA lies to the east of Bhutan and extends eastwards to the Burma border. In the west, where the major fighting took place, is the monastery of Towang with a village based upon the monastery. There are three distinct ranges between the border and the Indian plains. First, the water-shed, on which lie the passes from west to east, Thag La (La meaning a pass in Tibetan language), Bum La and Tulung La. Average height of these passes is over 16,000 feet. South, approximately sixty kilometers away is another over which is the prominent Se La pass, height 14,000 feet. Further south, another 100 kilometers is the third prominent range over which the most important crossing place is Bomdi La, at a height of about 9,000 feet. It is also a district headquarters, an administrative center and as such the most important place in the area. Between Se La and Bomdi La, in the

valley and roughly midway is the village of Dirrang Dzong, of no tactical significance except that it is that much closer to the border and the important Se La pass. South of Bomdi La the hills gradually decrease till the plains are reached. This area is known as Foothills.

In 1962, a single road existed from Foothills to Bomdi La and then on to Se La. Beyond that a smaller road wound its way forward to Towang. Beyond Towang there were no roads, only mule tracks up to the border. On the Chinese side, the communications were as primitive except that they had a road right up to Bum La on their side of the border. When the border issue came into prominence, one Indian division, the 4th Infantry Division, was moved into the area. The deployment was neither systematic nor well planned. A brigade was deployed on the border, north of Towang. Its main task was to police the border and deter Chinese incursions. Another brigade was deployed at Se La, part of a third with the divisional headquarters at Dirrang Dzong and the remainder, over a brigade strength at Bomdi La. Communications were tenuous or non-existent. Lines of supply depended on the one road. Troops deployed were ill-equipped and unprepared to fight in such tortuous regions. Special training to prepare troops for this terrain was not carried out and the lack of perception on part of the responsible commanders was equally remarkable. It needs to be clarified that the Chinese were equally hampered by the terrain, but were better prepared to fight in the area, both psychologically and materially, the latter in terms of clothing and equipment.

On 20 October 1962, the Chinese after careful preparation, opened their attack north of Towang. They attacked the center of the Indian line in overwhelming strength and despite individual heroism of the Indian rank

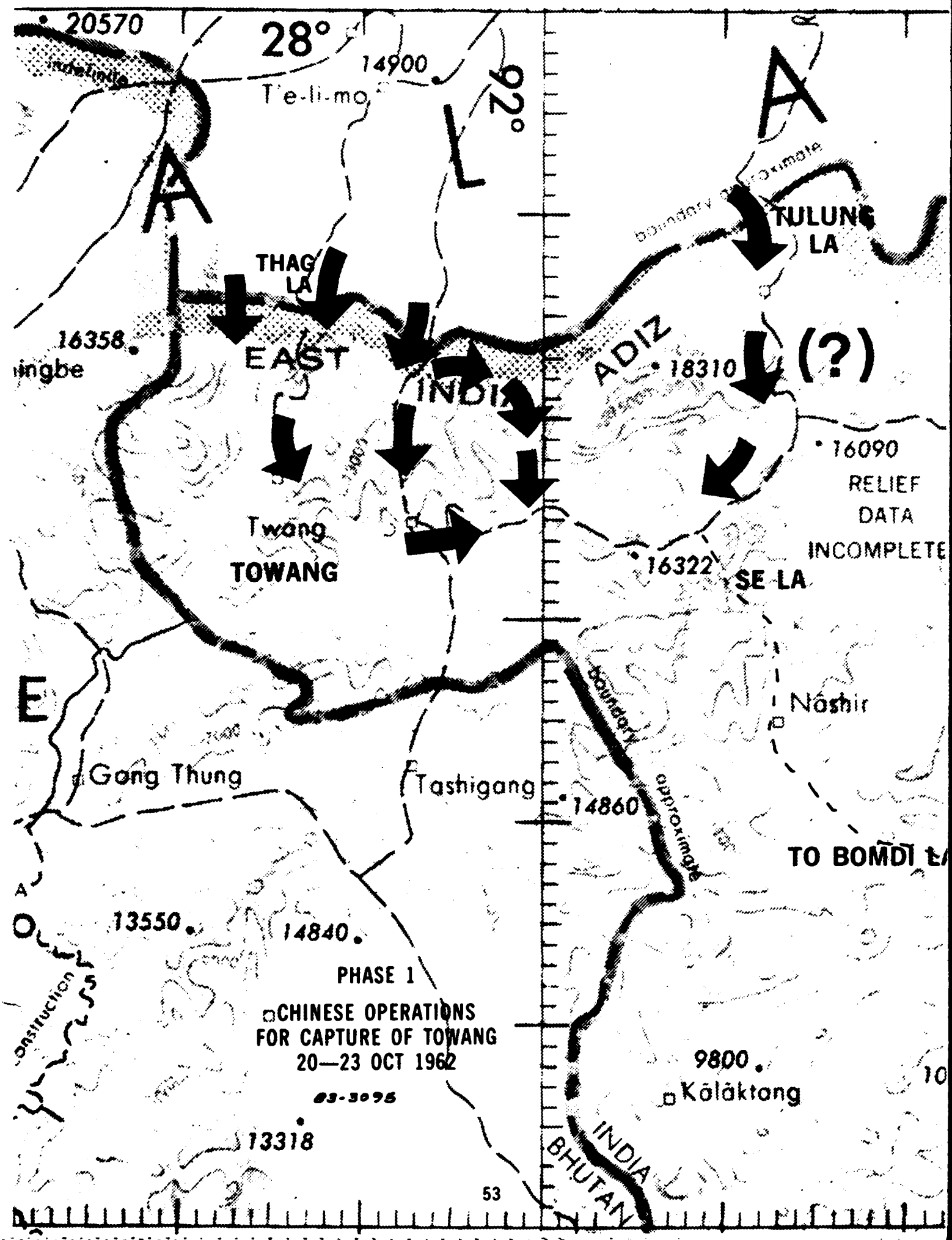


and file, were soon in the rear of the brigade deployed on the border. This had made the whole line, dispersed as it was, untenable. The Chinese showed greater mobility and blocked all the routes of withdrawal of Indian troops, many of whom were taken prisoner. Towang, located at the bottom of an indefensible spur, was captured by the Chinese without a fight.

The next Indian stand was to be made at Se La. This position is difficult to assault and easy to defend. However, the rapidity of the Chinese success at the border had unnerved the local commanders. The decision whether to hold Se La in the north and further along the line of communications or at the closer Bomdi La, was debated. This was never resolved till the Chinese attacked Se La on 17 November and made the question academic. The Chinese delay in proceeding with the attack after having succeeded on the border was due to logistics. They hurriedly built a class five (one ton) road linking their road up to Bum La with Towang, and thus with the existing communications on the Indian side.

The attack was launched along the road at Se La and simultaneously Chinese foot columns bypassed the Indian positions from east and west, using what may best be described as mountain trails. They showed commendable energy in pressing on, out-flanking Se La and threatening the Dirrang Dzong position. Even before this was attacked, patrols had moved out to contact Bomdi La. Considering the rugged nature of the terrain, the mobility displayed by the Chinese, wholly on foot, is worthy of note.

On the Indian side, the Se La position was ordered to withdraw, much against the wishes of the brigade commander. The divisional headquarters and the Dirrang Dzong position, were all swept away by the Chinese rush and dispersed. Some of the retreating troops were caught in blocking



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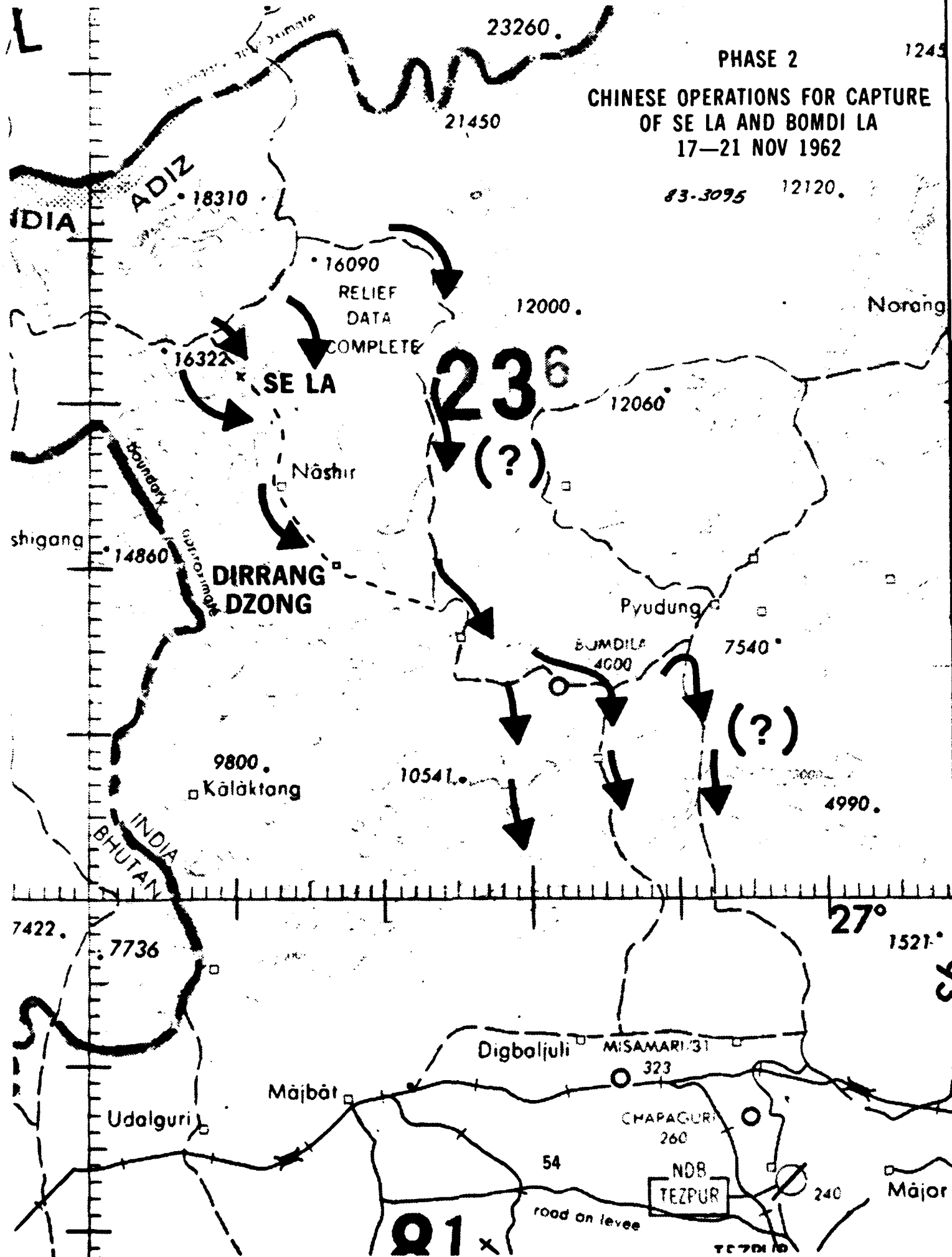
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CHINESE OPERATIONS FOR CAPTURE  
OF SE LA AND BOMDI LA  
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positions and forced to lose whatever cohesion existed. By now the rout was complete and even the Bomdi La position was unable to hold the Chinese. To complete the story, Chinese spearheads were soon overlooking the plains. However, on 21 November, China declared a unilateral ceasefire and withdrew in NEFA, to their original positions. This is the existing situation today.

The Chinese exhibited mobility in the mountains that no one had thought possible. True, their task had been made easier by the weak and unprepared responses on the Indian side, but the concept of a mobile attack in unfavorable terrain deserves study. Chinese operations can be divided into two phases, first the penetration of the border and second, the advance from Towang to the foothills. The first was more steady, though the attackers showed how mobility could turn a position. Once they built up a road to link their own line of communication, in the second phase by sheer movement they unnerved the defenders and defeated them.

Applying Liddell Hart's axioms to this little campaign, their relevance becomes apparent. In every maneuver, the attackers chose the line of least expectation and having found lack of resistance, followed it up relentlessly. By getting behind the defensive positions, they consistently threatened more than one objective; the one they had got behind and the one they were in front of. More than any other factor, it was possibly this one which upset the Indian defensive system. By being flexible, they were able to exploit success, because it is unlikely that the Chinese would have expected to win so easily, with so little resistance on part of the defenders. Overall, they adopted the indirect approach, the way around, to achieve success. It is indeed curious but true, that

the tenets of a mobile attack can be deduced from these operations, so very different from the type that mobile operations are normally associated with, and demonstrates the basic nature of this technique.

This is sufficient to show applicability of Liddell Hart's doctrine, in an area where traditionally one may not expect its use. There is no literature from the Chinese side giving their version of the campaign. Equally, from the Indian side, the few available accounts are biased and aimed at salvaging reputations. An authoritative and studied history of the campaign is yet to be written, though long overdue. However, in the absence of documentation, it is left to deduction that it is unlikely that the Chinese thought consciously of applying the mobile attack. They appear to have been flexible enough to exploit the chances that came their way and used their mobility to great advantage. It is very much what Liddell Hart would have recommended.

This is the tactical application of the indirect approach. On the other hand, the strategic application of the indirect approach has been analyzed in depth. Bond describes contemporary criticism<sup>17</sup> and the points then raised against the theory hold good even today. T.E. Lawrence said that he feared that equally logically the opposite thesis could have been established, a criticism echoed by Field Marshal Wavell that it would have been called the strategy of the direct approach. Another reader, General Bartholomew, then on the British General Staff, felt that proving of the theory by relying on past examples was not very convincing and that Liddell Hart was stressing the indirect approach for its surprise value. Fuller felt that the quickest way, whether direct or indirect, was the best. Bond goes on to call it an 'educational doctrine'.<sup>18</sup> Others such

as Higham and Luvaas are not as critical, the former stating that Liddell Hart's reputation will rest more upon this work than anything else.<sup>19</sup>

### CHAPTER III NOTES

<sup>1</sup>John I. Alger, The Quest for Victory (Westport, CT: Greenwood Press, 1982), p. 190. Alger's book is an interesting study in the development of the 'doctrine' of principles of war. He examines in detail the principles stated by various countries, their development and their role as guides for commanders. He concludes that, "To ignore their role in battle, however, would be to ignore the wisdom of the past."

<sup>2</sup>Jay Luvaas, p. 381.

<sup>3</sup>Bond, Lieutenant Colonel L.V., "The Tactical Theories of Captain Liddell Hart (A Criticism)," The Royal Engineers Journal, September 1922, pp. 153-163. Bond later rose to the rank of Lieutenant General and was the General Officer Commanding Singapore from 1 August 1939 till relieved on 14 May 1941. Part of the blame for the unpreparedness of Malaya and Singapore has been laid on him for his short sighted policies and inflexible attitude. See S.W. Kirby, Singapore: The Chain of Disaster (New York: Macmillan, 1971).

<sup>4</sup>Bond, Lieutenant Colonel L.V., p. 161.

<sup>5</sup>Liddell Hart, "Colonel Bond's Criticisms. (A Reply)," The Royal Engineers Journal, November 1922, pp. 297-309.

<sup>6</sup>Liddell Hart was not the only one to take exception to the tone of Colonel Bond's criticism. A Colonel Walker wrote to the Editor suggesting that such destructive criticism had little or no value. The Royal Engineers Journal, November 1922, p. 238.

<sup>7</sup>Liddell Hart, Ibid., pp. 304-305.

<sup>8</sup>For a detailed discussion of the German tactics of 1918, see Lupfer, Timothy T., "The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War", Leavenworth Papers No. 4, July 1981.

<sup>9</sup>Liddell Hart, Memoirs, vol. 1, p. 44.

<sup>10</sup>Lupfer, Leavenworth Papers No. 4, p. 39. Also see Note 8.

<sup>11</sup>Anonymous, "Infantry Tactics, 1914-1918", RUSI Journal, vol. LXIV, August 1919, pp. 460-469.

<sup>12</sup>The Infantry Journal, Inc., Infantry in Battle, 2d ed. (Washington, D.C., 1939), Chapter XXI, pp. 307-323.

<sup>13</sup>U.S. Department of the Army, Field Manual 100-5, Operations (Washington, D.C.: U.S. Army A.G. Publications Center, August 1982), p. 2-4.

<sup>14</sup>*Ibid.*, p. 2-9.

<sup>15</sup>Field Marshal Lord Carver, The Apostles of Mobility (New York: Holmes and Meier Publishers, Inc., 1979).

<sup>16</sup>Even after this interval in time, there is no official account of the fighting from either the Indian or Chinese side. The account in this chapter has been drawn from a number of books and articles as well as personal experience of the researcher from service in that area. Maximum reliance has been placed on three sources, two books and one article. The first book, Neville Maxwell, India's China War (New York: Doubleday and Co., Inc., 1972) appears authoritative. However, its forte is the political scene and since it is extremely critical of the Indian Government, has its popular following. Maxwell was a correspondent of the London Times in New Delhi during this period and quotes some Indian military sources he is unwilling to disclose. The other book is by the late Brigadier J.P. Dalvi of the Indian Army, Himalayan Blunder (New Delhi: Hind Pocket Books Private Ltd., 1972). Dalvi commanded the ill-fated Indian brigade deployed on the Sino-Indian border which suffered grievously and was a prisoner of the Chinese. He was considered a competent commander, both before and after the campaign and his military reputation has not been sullied. His book, though low in its literary quality, has the advantage of a first hand account and is quite popular in India. The most objective piece is by Maharaj K. Chopra, a retired officer and a defense analyst, "The Himalayan Border War: An Indian Military View", Military Review, May 1963, pp. 8-16. There is yet another article by Rear Admiral Ben Eisman, MC, USNR, "Border War", Marine Corps Gazette, September 1976, pp. 19-25. While correct in its assessment, it is full of errors of detail. This does not quote any sources and seems to have relied on the sources quoted earlier.

<sup>17</sup>Brian Bond, Liddell Hart, p. 55.

<sup>18</sup>*Ibid.*, p. 59.

<sup>19</sup>Higham, The Military Intellectuals in Britain 1918-1939, pp. 93-95.

## CHAPTER IV

### LIDDELL HART IN PERSPECTIVE

#### Section 1: INTRODUCTION

The mobile attack advocated by Liddell Hart was based upon the expanding torrent method of attack. Such an attack would be even more successful, if it were launched using an indirect approach. This is Liddell Hart's major contribution to tactical doctrine. The success of a mobile attack depends upon the ability of the attacking force to maneuver. Thus the attacker must create suitable opportunities to allow him to do so. We have seen that Liddell Hart deduced certain maxims which he felt were the distilled essence of warfare.<sup>1</sup> But as an earlier critic pointed out, drawing lessons from history was not wholly convincing.<sup>2</sup> There is a need to examine these axioms to judge their practicality, with particular reference to the mobile attack in modern conditions. Last, Liddell Hart had suggested that modern war would require employment of all arms combined to form teams, for maximum effect. Thus an attack will equally depend upon the proper organization of the assaulting force, for success. This organization will be based on the grouping of the two major fighting arms, tanks and infantry. In studying Liddell Hart's theories, this organizational factor also needs consideration.

Liddell Hart's doctrine on the expanding torrent method of attack and the indirect approach was examined in the last chapter. The aim of

this chapter is to place in perspective Liddell Hart's doctrine by relating to the practical sphere. The basic nature of the theories ensures that there will be applicability, at least in the near future. Once this discussion is completed, it only remains to draw conclusions from this study of Liddell Hart's theories. This will be done in the next and final chapter.

## Section 2: THE MOBILE ATTACK

An attack can take place in a variety of situations. It might be at the start of a war or a campaign, or it might be launched in a different sector after an enemy has attacked and made gains elsewhere, or it might occur when an enemy thrust has been halted and a counter-stroke launched to regain the initiative and/or destroy the enemy. Thus the first prerequisite for a successful mobile attack, 'the expanding torrent', is the achievement of a penetration to pass through the exploiting force.

A very different situation would exist if the attacker was unable to achieve any significant success. Today the line between potential belligerents has been recognizably drawn and in case a war like atmosphere builds up, with adequate warning, it is likely that adversaries on both sides would occupy battle positions and prepare to repel the invader. This is said not only in the commonly recognized European context, but anywhere in the world where conflict is likely. Thus there is an immediate burden on the attacker whose first step has to be to break through the crust of enemy defenses before operations can proceed. The attacker has the advantage of initiative but the problem of breaking through does not diminish because of it. The defensive belts in some cases are extensive,



well prepared and are likely to rest on natural obstacles, so that they cannot be turned. The success of the initial attack will be critical.

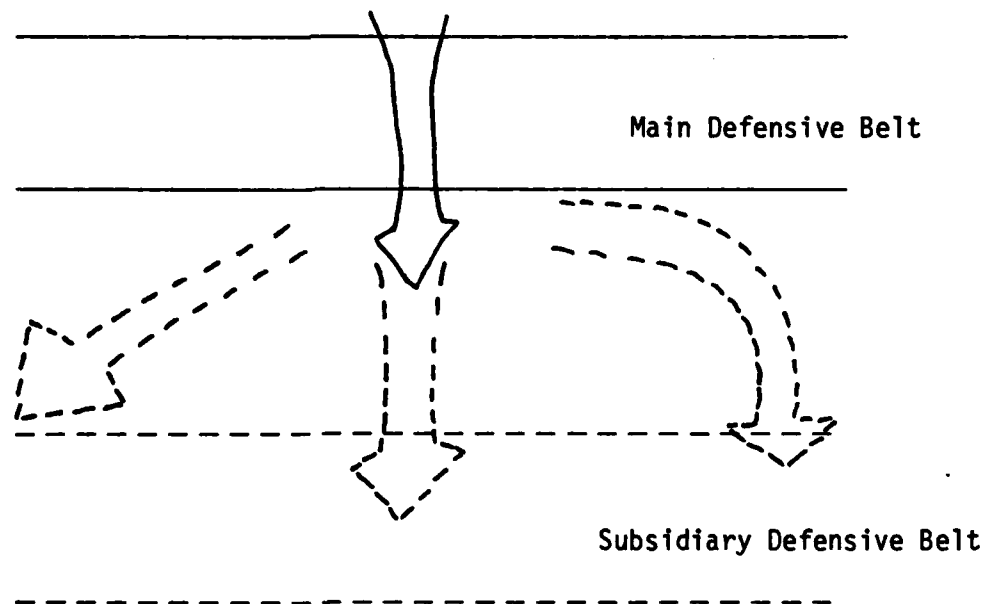
The criticality of success in the initial phase dictates that the attack must be in overwhelming strength, both moral and material, and it must also take place in more than one sector, so that lack of success on one side need not hold up operations altogether. This will result in the attacker driving in a wedge into the defenses. The defender in turn, knows that such a wedge is likely to occur, and places his reserves to seal off the penetration, before attempting to destroy it. A race develops between the attacker and the defender, as to who can mass at the critical time and place. The attacker has to get behind the defensive belt and the defender must prevent such a happening.

In a mobile attack, success will equally depend upon the exploitation forces moving through quickly enough, so that by the very speed of their advance, they overtake the enemy's reaction. When the defender is fighting according to a prepared defensive plan and has comparable mobility to the attacker, reacting to enemy initiatives is a difficult task at the best of times. If either adversary is able to interfere with the other's mobility, the advantage will go to the side that retains or achieves superior mobility. Mobility can be disrupted in a number of ways. A defender can do it by means of fire, direct or indirect, on the penetration that the enemy has been able to achieve, by use of obstacles and by maneuver elements such as reserves moving into blocking positions. An attacker can interfere with a defender's mobility by aerial interdiction and seizing rapidly such terrain as is essential to the defender to fight a successful defensive battle. Today, with improved aircraft, helicopters

and electronic warfare means, it is possible for any side to interfere with the other's mobility in the manner just described.

This means that conducting an attack as advocated by Liddell Hart needs the following conditions. A successful enough penetration to allow the passage of the exploitation force, sufficient mobility on part of the exploitation force to overcome enemy's probable reaction, the attack directed towards terrain that will hinder the defender and finally, a suppression of enemy's mobility thereby preventing him from being able to react in a planned manner.

Once an attacker is able to get behind the enemy's main defensive belt, in whatever number of echelons that he may have set it up, it increases the opportunities for further action, because now the direction of attack can be changed to 'threaten alternate objectives'. The following diagram will help to illustrate.



A situation such as the one just described where an attack must penetrate enemy defenses before being able to spread out, is nothing new. General B.L. Montgomery, commanding the British 8th Army in North Africa in the latter part of 1942, faced a similar situation at the battle now famous as El Alamein. Here the Axis forces under the legendary General Rommel were occupying well prepared defenses from the sea in the north to the Qattara Depression in the south. (See figure.) The northern flank could only be turned from the sea by an amphibious operation, for which resources were not available. The southern flank could not be used by any sizeable force. General Montgomery decided to punch through two corridors to get behind the enemy defensive belt. No exponent of the mobile attack, Montgomery divided his attack into the following periods.<sup>3</sup>

- a. The Break In period, to gain an initial foothold into the enemy defenses.
- b. The Dog Fight, to enlarge the foothold.
- c. The Break Out, to breakout beyond the defenses.

The progress of the battle of El Alamein is not of concern to this study. The plan was, very briefly, for the 10th Armored Corps to push through the infantry corridors and force enemy armor to counter attack them. Once enemy armor and infantry were dealt with separately, the pursuit would be carried out. Montgomery has been criticized among others by Liddell Hart himself,<sup>4</sup> for not using the mobility of his armored formations to operate behind the defensive belt and strike deep into Rommel's rear. We can now attempt to apply Liddell Hart's expanding torrent method of attack. This would have meant that as soon as the corridors were ready, the armored divisions of the 10th Corps should have proceeded forthwith to

[illegible]

capture depth objectives and upset the defensive plan. They should not have worried about their flanks because of the very momentum of their mobility they would have overcome enemy reaction. Once again, for the purpose of this study, there is no need to plunge into the controversy of what Montgomery could have done. The relevant point is that without penetration of the defenses, the mobile armored formations could not have broken into the open. In his account of the battle, Montgomery describes how the first crisis<sup>5</sup> in the battle occurred when there was some doubt whether the initially planned penetration would be successful. This is a very real possibility and an attacker who tries to build mobility into the attack, must take action that his attack does not get stalled before he can bring to bear his superior mobility.

Thus every mobile attack depends on a successful initial penetration of enemy defenses. Second, for the exploitation force to pass through, they must have sufficient space which must be free from interference. Third, the enemy's mobility must be interfered with and one's own protected. Any mobile attack today must achieve these conditions. However, there is a simple way that this situation can be avoided, if at all possible. That is, the initial attack, if the opportunity exists, should take place in an area unoccupied by the enemy and give the mobile forces capability to operate in the open and force the enemy to react. Such an opportunity is not usually likely to be available. But, 'hit 'em where they ain't',<sup>6</sup> is what describes this succinctly. Thus before a decision is taken to attack to effect a penetration, every possibility must be explored to see if an attack can be launched were the enemy does not have a defensive belt or if at all, holds it weakly. A mobile attack that depends upon heavy

fighting in the initial stages to allow mobile forces to operate is likely to develop into a slogging match. The expanding torrent method of attack will work, only if it has the ability to maneuver. This it is likely to do, if an indirect approach is adopted.

A simple test can be applied to assess the practicality of the indirect approach. Liddell Hart had deduced certain axioms, which can be examined to see how they can be applied to adopt the indirect approach on the tactical battlefield.

### Section 3: LIDDELL HART'S TACTICAL AXIOMS

The axioms that Liddell Hart had deduced have been reproduced in an earlier chapter.<sup>7</sup> Since Liddell Hart was a staunch advocate of mobility, it is logical to assume that these axioms, if correctly applied, would fit a mobile attack. Examination shows that they do, though some are more difficult to implement than others. These are now discussed singly.

'Adjust your ends to your means'. Simple and logical enough as this may sound, it can be interpreted in a negative way. For example, it may appear that applying this axiom, one would always err on the side of caution. The Israeli actions in the face of great odds in all their wars, suggest that they had always aimed at ends to give maximum value for their means. The lesson here is that a realistic appraisal of one's capabilities is essential if a correct assessment is to be made. It should not suggest, and Liddell Hart is not likely to have advocated, undue caution.

'Keep your object in mind, while adapting your plan to circumstances'. Objective and flexibility, the latter, maneuver, in U.S. Army terms, are two common principles of war. While the strategic application

of this axiom may be readily apparent, its tactical use is a little different. At the tactical level, flexibility is of paramount importance in order to achieve the objective. However, in case of failure, it is essential that a force does not keep butting its head against an impossible objective. Thus the 'object' and 'objective' at the tactical level will be separate and need to be recognized as such. If the objective is important enough, then the commander must clearly understand what he is prepared to sacrifice for it. In a mobile battle, maneuver will usually take precedence over an objective and this is where flexibility assumes a greater importance.

'Choose the line (or course) of least expectation'. This is easier said than done. The problem is that an adversary is likely to be susceptible to any course of action and particularly those that can hurt him most. If this be the case, then it is a real dilemma to recognize the line or course of least expectation. Surprise as a principle of war has yielded dividends out of proportion to its use. Surprise, says an old British manual,<sup>8</sup> may be achieved by the use of a new weapon, equipment or technique and its elements are secrecy, concealment, deception, originality, audacity and rapidity. The adoption of a course of least expectation may mean the use of one or all of these elements. On the tactical battlefield, it should not be limited to mean purely an avenue of approach.

'Exploit the line of least resistance. (In tactics, this maxim applies to the use of your reserves; ...)". The arguments stated in the previous paragraph, equally apply in this case. In the fog of battle, it may at times be difficult to discern where the least resistance is, thus

showing the necessity of correct intelligence. Every attacking commander has at the back of his mind the suspicion that he may be being led into a trap. Easier the advance, the stronger such a suspicion is likely to be. This is not to suggest overcautiousness, but a likely reaction. Once again, a commander has to maintain a balance between rushing into a success and maintaining flexibility by retaining balanced dispositions to achieve what he set out to do in the first place. In a mobile attack, initial penetration is most essential and reserves may have to be used to achieve it. Thus exploitation of the line of least resistance must lead towards the final objective and a commander has to bear this in mind constantly.

'Take a line of operation which offers alternative objectives'. Of all Liddell Hart's maxims, this possibly is the most telling one, particularly in an attack where mobility is necessary. A line of advance, which can threaten different objectives will always keep a defender guessing as to where the weight of the assault will fall. The faster this threat is posed, the greater the confusion that can be created. However, this can happen only after the enemy's forward defensive belt has been breached, because only after the integrity of a defense is threatened, is the defender's dilemma likely to increase. At the start of a battle, in any case the initiative lies with the attacker and thus a force in being, will threaten different objectives. This is expected by a defender. But once the forward line of defenses has been breached, then the threat to different objectives adds to a defender's problems. This only reinforces the earlier statement that the success of initial attacks to effect penetration of enemy's forward defenses is critical.



'Ensure that both plan and dispositions are flexible - adaptable to circumstances'. At the tactical level, a commander achieves flexibility by use of his reserves, which are usually located close at hand. This has the effect that once reserves are positioned forward on the ground, their shifting is difficult. If they are kept too far back, then the time to bring them into action is thereby increased. The ability to move reserves by air on the battlefield, has simplified this problem for the modern commander, provided he has the necessary resources.

'Do not throw your weight into a stroke whilst your opponent is on guard'. Once again, this is easier said than done. Unless a preemptive strike is made, like the one that the Israelis made in 1967 to start the Six Day War, the opponent is likely to be prepared. It is also true that in a future conflict, the initiation of hostilities is unlikely to come from democracies of the free world. Thus the first attack may have to be made, of necessity, against a warned defender. This only serves to make the opening battle more critical.

'Do not renew an attack along the same line (or in the same form) after it has once failed'. Field Marshal Montgomery once said that in every battle a stage comes when both opponents think that they have lost the battle. At such a stage, the one who presses on, wins. There is a need to distinguish between when pressing on with an attack is detrimental to the final aim as opposed to that last push which will dislodge a defender. On a tactical level, the fog of war will often prevent a commander from gaining a true picture of what the enemy's true state is. At such a time, the experience and quality of the attacking commander will dictate what he is going to do. Liddell Hart's maxim with his First World War background

is wholly understandable in that context, but a commander in the field will have to make an assessment based upon the facts that he has. The decision to continue the attack along the same line or change it will always remain a critical command decision.

Summarizing, Liddell Hart's maxims are true and practicable, but a commander who is fighting a battle will find it hard to apply them, mainly because he will not be able to recognize the situation in its entirety. This does not mean that they are inapplicable. A commander who makes his plan needs to consider how these rules can be applied by him, in much the same manner that he ensures that the principles of war are not violated. Once the plan is made to the best of one's ability and troops are committed to battle, a commander must react as he deems fit. It is unlikely that a modern commander will have the opportunity to sit back and take a detached view, but then his whole training and experience drives towards command in battle and deciding should not be difficult. An excellent description of a divisional commander in combat comes from Field Marshal Slim, who commanded the Allied 14th Army and drove the Japanese out of Burma in 1944-45. Slim writes of Major General 'Punch' Cowan, commanding the 17th Indian Division at the battle of Meiktila,

"Cowan's conduct of this difficult and divided battle was impressive. With his main attention fixed on various assaulting brigades, he had at frequent intervals to glance over his shoulder as ground and air reports of Japanese movements in the surrounding country were brought to him. He had, too, all the anxieties of an air supply line, which rested on precariously held landing strips at a time when ammunition and petrol expenditure was at its highest. Not least, he was very short of sleep and remained so for several days. Yet throughout he was alert to every change in the situation on any sector, and swung his air and artillery support to meet and take advantage of it. His

firm grip on his own formations and on the enemy never faltered. To watch a highly skilled, experienced and resolute commander controlling a hard-fought battle is to see, not only a man triumphing over the highest mental and physical stresses, but an artist producing his effects in the most complicated and difficult of all arts. I thought as I watched what very good divisional commanders I had."<sup>9</sup>

Handsome praise from one of the great generals of the Second World War. This description aptly shows how a modern commander would have to control his fast moving battle. It follows that leaders who could execute an attack of the type that Liddell Hart advocated, would have to be of superior quality. This is not to suggest that weak commanders would succeed in slow moving combat, far from it. Success in war needs leadership of a superior quality in any case, but the pressures on a highly mobile battlefield would be compounded. Modern commanders would have to fight under pressure of the kind not seen before. They will have to be better than at least their enemy. Difficult to achieve, but no army can show itself unaware of the type and quality of leadership required.

#### Section 4: THE COMBINED ARMS GROUPING

The type of action described in the previous section will have to be carried out by teams comprised of all arms, to include tanks, infantry, artillery, air and other support on the battlefield. Liddell Hart had foreseen the interdependence of various arms when he had, unlike Fuller, pressed for mechanization of infantry. This was addressed and developed by the Germans, whose Blitzkrieg owed much to this concept of combined arms. There has been considerable progress since then and there is no denying the necessity to group, basically, tanks and infantry. As technology improves, the ability of the infantry to keep up with tanks

decreases. The introduction of the M-1 tank and hence the need for a new infantry fighting vehicle, is a case in point. However, this is an old problem which constantly recurs. The main question is the level at which infantry and tanks should be combined. This has a bearing on the organization of infantry and tank units, as subsequent discussion will show.

The lowest level at which tanks and infantry should be grouped has been the subject of considerable discussion and experiment. There are some armies, such as the French, who feel that not only is grouping necessary in combat but also in peacetime to facilitate training, and have organized battalion sized units which have both tanks and infantry. Other armies, notably the American and British, maintain different tank and infantry battalions but have the ability to group companies or sub-units from one to the other for specific tasks. The lowest level at which grouping is combined for purposes of combat, is said to depend upon the situation. This is most unsatisfactory, because if combined arms teams do not train together as a matter of course, they would find it hard to work together in battle. The other advantage of fixed grouping is that when the same infantry works with the same tanks, it builds up a corporate spirit, which is so invaluable in combat. A simple example of minor infantry - tank cooperation in battle will serve to show, how at the lowest level, the two can work together. This example too, is by Field Marshal Slim, which describes how he watched an action, in the battle that Cowan was directing and was mentioned in the previous section.

"After speaking on the 'blower', to a brigade commander... I left Cowan conducting his grim orchestra. Assured that the battle was in competent hands at the top, I thought I would go a little closer and see how it was being handled lower down... We went by jeep around the north of the town and then moved

forward on foot somewhat more cautiously. We had a word with various subordinate commanders on the way; all very busy with their own little battles and all in great heart. One of them told us the best place from which to see anything was a massive pagoda that crowned a nearby rise. We reached it along a path screened from the enemy by bushes, and, crouching below the surrounding wall, crossed a wide terrace, where already in occupation were some Indian signallers and observation parties. Peering cautiously over the wall, we found on our right the end of the North Lake, placid and unruffled. To our left front, about a thousand yards away, the main road entered Meiktila between close-built houses...We were, I knew, about to assault here, but it was the scene immediately below and in front of us which gripped the attention.

The southern shore of the lake for nearly a mile ran roughly parallel to the northern edge of the town. Between them was a strip about half a mile wide of rough, undulating country, cut up by ditches and banks, with here and there clumps of trees and bushes. Three hundred yards from us, scattered along the water cuts, peering around mounds, and lying behind bushes, were twenty or thirty Gurkhas, all very close to the ground and evidently, from the spurts around them, under fairly heavy fire. Well to the left of these Gurkhas and a little farther forward there was a small spinney. From its edge more Gurkhas were firing Bren-gun bursts. A single Sherman tank, in a scrub-hollow, lay between us and the spinney, concealed from the enemy but visible to us. In the intervals of firing we could hear its engine muttering and grumbling. The dispositions of our forces, two platoons and a tank, were plain enough to us, but I could see no enemy.

Then the tank revved up its engine to a stuttering roar, edged forward a few yards, fired a couple of shots in quick succession, and discreetly withdrew into cover again. I watched the strike of the shot. Through my glasses I could see, about five hundred yards away, three low grassy hummocks. Innocent enough they looked, and little different from half-a-dozen others. Yet straining my eyes, I spotted a dark loophole in one around which hung the misty smoke of a hot machine gun; I could hear the 'knock-knock-knock', slower than our own, of its firing. Searching carefully, I picked up loopholes in other mounds. Here were three typical Japanese bunkers, impervious to any but the heaviest shells, sited for all-round defence and bristling with automatics - tough nuts indeed. The tank intervened again. Without shifting position it lobbed two or three grenades, and a white screen of smoke drifted across the front of the bunkers. One of the Gurkhas below us sprang to his feet, waved an arm, and the whole party, crouching as they went, ran forward. When the smoke blew clear a minute or two later, they were all down under cover again, but a hundred

yards nearer those bunkers. A few small shells burst in the water at the lake's edge. Whether they were meant for the tank or the Gurkhas, they got neither and the enemy gunners made no further contribution.

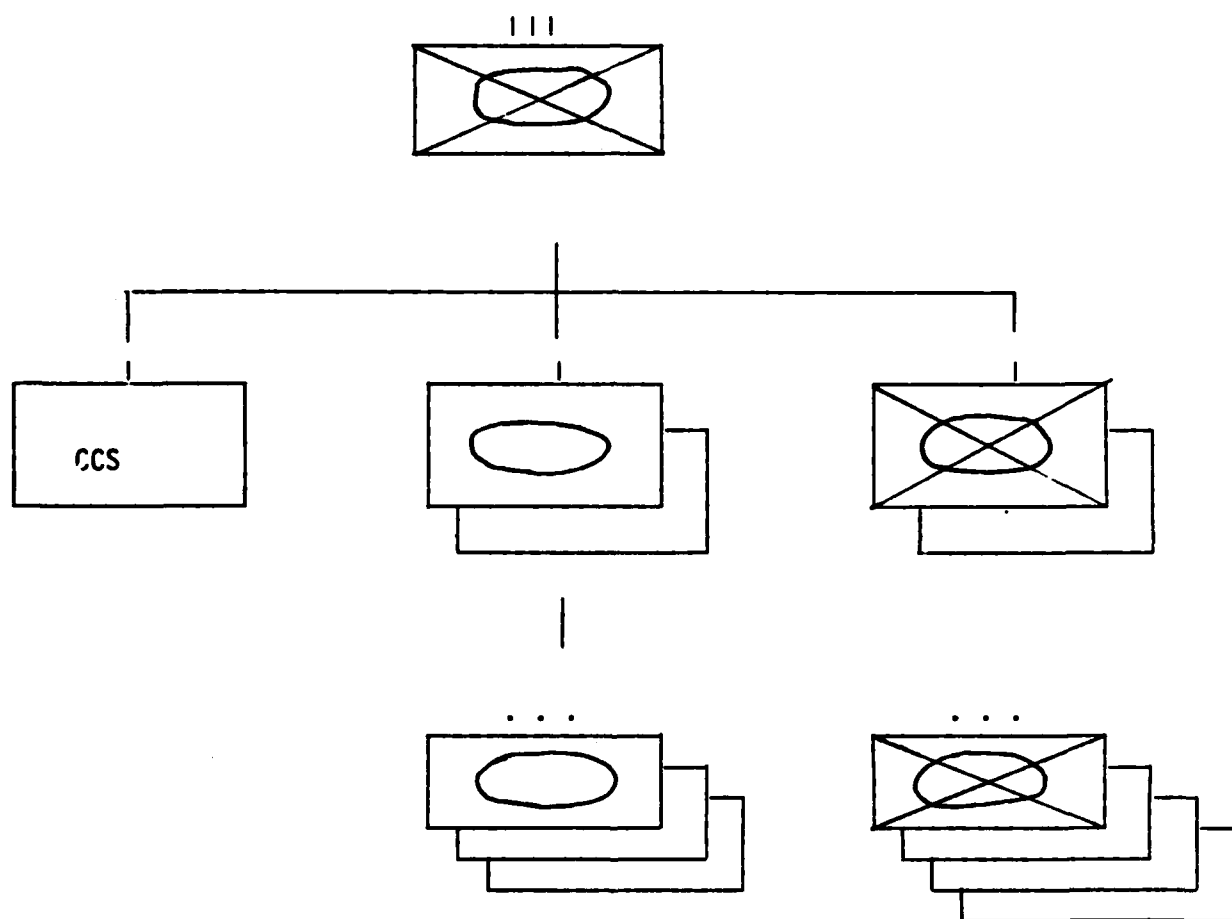
When I looked for it again, the tank had disappeared, but a smoke screen this time, I think, from infantry mortars, blinded the bunkers again. The Gurkhas scrambled forward, dodging and twisting over the rough ground, until some of them must have been hardly thirty yards from the enemy. Somewhere behind the spinney the tank was slowly and methodically firing solid shot at the loopholes. spurts of dust and debris leaped up at every impact...

The fire of Brens and rifles swelled in volume; the tank's gun thudded away. Suddenly, three Gurkhas sprang up simultaneously and dashed forward. One fell, but the other two covered the few yards to the bunkers and thrust tommy guns through loopholes. Behind them surged an uneven line of their comrades; another broke from the spinney, bayonets glinting. They swarmed around the bunkers, and for a moment all firing ceased. Then from behind one of the hummocks appeared a ragged group of half-a-dozen kahki-clad figures, running for safety. They were led, I noticed, by a man exceptionally tall for a Japanese. Twenty Gurkha rifles came up and crashed a volley. Alas for Gurkha marksmanship! Not a Japanese fell; zigzagging, they ran on. But in a few seconds, as the Gurkhas fired again, they were all down, the last to fall being the tall man. The tank lumbered up, dipped its gun and, with unnecessary emphasis, finished him off. Within ten minutes, having made sure no Japanese remained alive in the bunkers, the two platoons of Gurkhas and their Indian manned tank moved on to their next assignment which would not be far away...It was all very businesslike."<sup>10</sup>

It would be difficult to match this example for exposition of the working of a combined arms team at the lowest level. However, the optimum mix of tanks and infantry needs to be worked out after proper examination. It is not the purpose here to discuss this in detail, because it should form a separate study in itself. The organizational factor mentioned earlier needs elaboration.

In the French Army, a mechanized regiment (a battalion sized unit) comprises two tank companies, each of three tank platoons and one missile platoon and two mechanized infantry companies, each of four platoons.

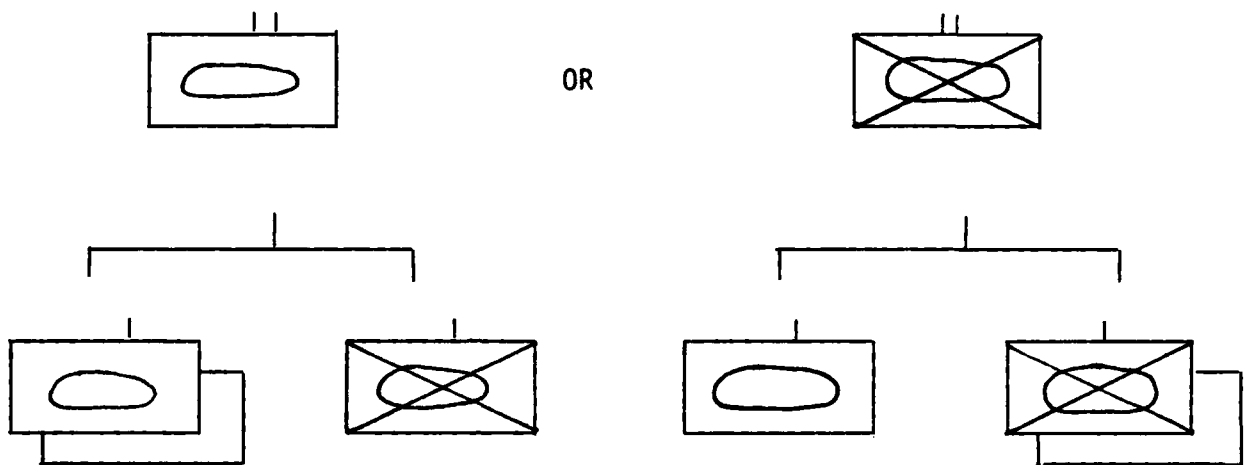
The organization for combat is at the company level where tank and infantry platoons are grouped under a company commander for a given task. The same platoons are always grouped under the same commander. This makes for a cohesive team in all circumstances. (See figure.)



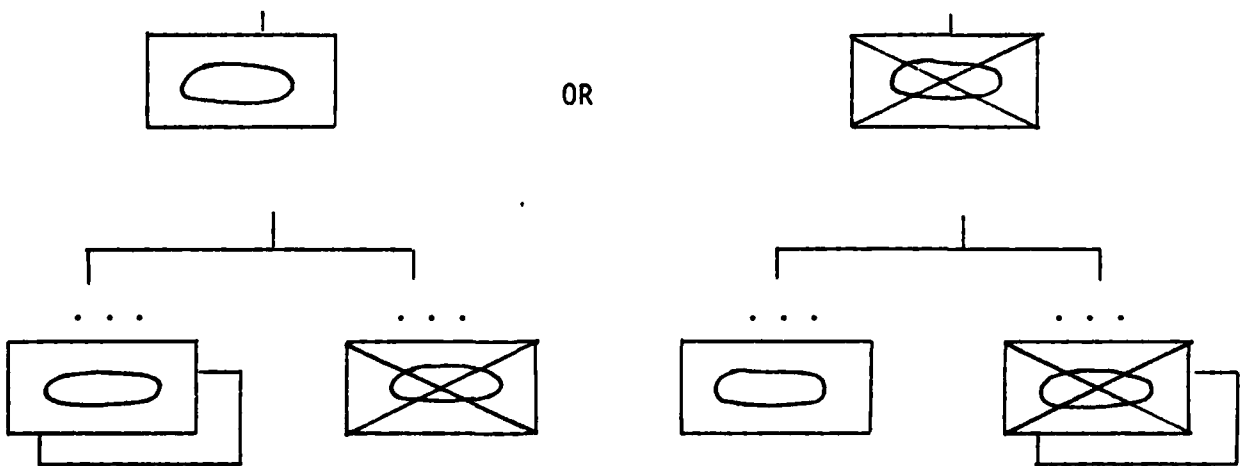
The British Army, with its regimental system has not chosen to group tanks and infantry in one battalion. But the net result is the same as the French. This is done by having a square brigade, that is a brigade with two tank and two mechanized infantry battalions. Each battalion has three company sized subunits. A battle group is formed at the battalion

level by mixing tank and infantry companies and teams are formed at the company level by mixing tank and infantry platoons. Thus a battle group and a combat team, organized for operations may look as shown in the next figure.

#### Battle Group



#### Combat Team





Admittedly, such grouping would depend upon the situation and task at hand. However, the point is that in both the British and French armies, a combined arms team is visualized and expected to fight at the company team level. Going back to Liddell Hart's dictum that a platoon should be the basic unit in combat, the decision to retain the entity of the platoon appears correct. The U.S. Army doctrine on forming the combat team is not very specific, but with the introduction of the M-1 tank, it suggests that combined arms grouping will not be below the battalion level and that tank and infantry companies will fight as separate entities. This is different from the experience of other armies and superficial examination shows that combined arms grouping should be at the company level. However, this does require further discussion, study and testing, before an optimum mix can be said to have been achieved. Liddell Hart's doctrine of the mobile attack, its need for employment of combined arms teams and modern conditions of combat would suggest that the French and British approach to the problem is the correct one.

#### CHAPTER IV NOTES

<sup>1</sup>Chapter II, Section 2, pp. 24-26.

<sup>2</sup>Chapter III, Section 3, p. 56.

<sup>3</sup>Montgomery, Field Marshal, El Alamein to the River Sangro (London: Barrie & Jenkins Ltd., 1973), pp. 24-31. The map is at p. 21.

<sup>4</sup>Liddell Hart, History of the Second World War (New York: G.P. Putnam's Sons, 1971), pp. 305-306.

<sup>5</sup>Montgomery, Field Marshal, Memoirs (London: Collins, 1958), pp. 129-130.

<sup>6</sup>MacArthur, General Douglas, Reminiscences (New York: McGraw-Hill Book Co., 1964), p. 166. MacArthur popularized this phrase to describe the island hopping strategy adopted in the Pacific theater during the Second World War.

<sup>7</sup>Chapter II, Section 2, pp. 24-26. Also Note 1 above.

<sup>8</sup>British War Office Publication No. 8472, Conduct of War (London: H.M.S.O.), Modified and reprinted in India in 1952, p. 7.

<sup>9</sup>Slim, Field Marshal, Defeat into Victory (New York: David McKay Company, Inc., 1961), p. 371.

<sup>10</sup>*Ibid.*, pp. 372-374.

## CHAPTER V

### MODERN APPLICATION OF LIDDELL HART'S DOCTRINE

#### INTRODUCTION

The world of warfare has changed considerably since 1920 when the young Liddell Hart stood in front of the audience at the Royal United Service Institution in London, to speak about the expanding torrent method of attack.<sup>1</sup> At that time, the mobile attack was a futurist doctrine and it is unlikely that Liddell Hart himself would have foreseen either the progress of technology or the effective use that was later made of his ideas. Military thought in the period between the two world wars was dominated by Liddell Hart and Fuller, and future students are likely to consider their work as complementing each other's. However, there was divergence in their views and Liddell Hart, less acerbic and controversial of the two, took a wider view of the concept of mobility, realizing the importance of tanks and infantry as a combined team.

The Second World War proved effectively the concept of the mobile attack. We have seen the later acknowledgement by the German generals such as Guderian,<sup>2</sup> of Liddell Hart's and indeed, Fuller's, influence in shaping their doctrine and tactical concepts. In the period following the Second War, Liddell Hart's prestige increased and his influence spread. Modern Israeli commanders drew lessons out of his writings to apply them to great effect, in their wars against the Arabs. It was Yigal Allon who saluted Liddell Hart as, "The Captain who teaches Generals".<sup>3</sup> Today,

it can be said that wherever mobile operations are studied, Liddell Hart's works are studied with great interest. The current U.S. Army Manual, FM 100-5, Operations, states, "...The ideal attack should resemble Liddell Hart's concept of the expanding torrent..."<sup>4</sup>

In the preceding chapters, we have traced the growth and progress of Liddell Hart's tactical doctrine, from the expanding torrent method of infantry attack to his realization of the value of tanks and the importance of the combined arms team. The thesis has examined the modern applicability of the mobile attack and the indirect approach and seen that Liddell Hart's theories can be applied across a broad spectrum of operations, whether the opponents are fully modernized or lack capability due to factors such as terrain. The Chinese operations against the Indian forces in the upper reaches of the Himalayas on India's north eastern frontier, showed that a mobile attack can be conducted in the most adverse conditions.<sup>5</sup>

This thesis also examined the prerequisites of a mobile attack and these were stated as, a successful penetration to allow the passage of the exploitation force, sufficient mobility with the exploitation force to overcome enemy reaction, the attack directed towards key terrain that will hinder a defender and suppression of enemy mobility. The discussion also examined the organizational factor necessary to form a combined arms team, including current practice in various armies. Having carried out this detailed examination, it now remains to draw conclusions from study of Liddell Hart's doctrine. This will be done in the fields of leadership, tactics, organization and equipment.

## LEADERSHIP

Combat leadership is at best an exacting task. Though a commander may be theoretically aware of all that is required of him in battle, it is difficult to recognize the true worth of a problem and take necessary action. For example, it is simple enough to state one of Liddell Hart's tactical axioms, that an attack should follow the path of least resistance. It is equally difficult for a commander, fighting a battle over extended distances, to realize in the fog of war, which is really the path that he needs to exploit. The critical need for correct intelligence has been brought out, but inspite of the best systems, there will always be an element of doubt. Field Marshal Slim's description of Cowan conducting his divisional battle shows the pressures under which a commander must work and the wide demands on his attention and judgment.<sup>6</sup> A modern commander, employing weapons and equipment far superior to any seen so far, will necessarily be subjected to even greater pressure.

Leadership is a vast and complex subject, but in the context of mobile warfare, two critical points deserve special mention. These are, decision making and a commander's place in battle. A commander fighting a mobile battle will have to have the ability to read the battle and take quick, decisive action. For him to be able to do this, it is essential that he is knowledgeable and professionally competent. In future, given complexity of the modern battlefield, a commander's decision making capability will be critical. Previous experience and training will no doubt play an important role in this process, but besides normal information and staff work, it is not so obvious at present as to what else can be made available to help the commander in his task. This decision making process needs further study before any conclusions can be drawn.

Similarly, in fast moving action, a commander will be hard put to choose his own location in battle. Effective leadership demands that leading be done from the front. In mobile operations, this will be even more important. Today, helicopters allow mobility to a commander that is invaluable. The need to make rapid decisions, communicate them and impress his personality on the command requires a commander to be present at the most critical place at the correct time. Thus a leader's place in battle will remain as important as it has always been and in mobile operations, it will be unusual for a commander to be a vague figure somewhere in the background or a voice on the radio, giving orders from a safe place. It is necessary to quote once again, Liddell Hart's reply to Bond, "...modern war has no use for stupid leaders. We must be ruthless in selection and persevering in training..."<sup>7</sup> There are many examples of leaders who have successfully fought mobile battles and demonstrated the type of leadership required. Guderian, Rommel, Patto from the Second World War and Yitzhak Rabin, Ariel Sharon of Israel, are just some of the few. Their actions need to be studied and emulated. A modern commander who seeks to be successful in fighting a mobile battle will have to be everything that effective combat leaders are and more. The 'more' will remain vague and difficult to define.

#### TACTICS

The tactical theories of Liddell Hart, namely the expanding torrent method of attack and the axioms he deduced while stating the indirect approach, are as valid today as they were when originally written. Theorizing about the rules of war has its own disadvantages. However, if a

practitioner understands the limitations of rules and theories, then the applicability of any doctrine can be tempered to suit needs and circumstances. Liddell Hart's doctrine of the mobile attack has applicability only after it is adapted to individual situations. It is definitely not a panacea to cover all contingencies.

The expanding torrent method of attack states that in an attack, any assaulting echelon that finds or makes a breach in defenses, should continue and reserves should follow where success has been achieved, assuming the role of those forces which have been held up. The echelon held up by enemy action should use its maneuver element to overcome the opposition. Once they have done so, should follow as reserve those now leading, ready to take over the lead once again, when required. Thus a breach in enemy defenses would be successively deepened and widened at every successive level. Such an attack should be continued till the final objective is reached and for this reason, the exploitation must be relentless. Analysis of this method of attack shows that exploitation of success can only be carried out, provided an initial breach has been achieved. Thus a commander conducting a mobile attack needs to first conduct a penetration into the enemy's forward line of defenses and then he needs to carry out a holding operation on the flanks of the breach to prevent the enemy from interfering while the exploitation forces are passing through. Once the forces are on the far side of the enemy's defensive belt, he needs to exploit rapidly to render the defense incapable of fighting a coherent defensive battle.

The force attacking to make the initial breach would usually have a heavy fight on its hands and would necessitate infantry predominant

organization, supported by tanks, artillery and air. Yet they will have to be mobile to be able to extend the breach, both laterally and in depth. Once the passage of exploitation forces commences, the penetration force that created the gap would have to hold off enemy reaction in terms of counter attacks and aerial interdiction. Their infantry dominant nature of organization will be suited to carry out such a task.

The forces who will pass through to carry out exploitation will need to be as mobile as possible and will also require the support of all other arms on the battlefield. They will also have to take action to prevent enemy reserves from interfering and this will best be achieved by the use of air power. The improved capability of helicopters and close support aircraft will aid such a task, but given an enemy with comparable capability, the control of air in a mobile battle will be crucial.

Once an initial breach is made and an attacking force is able to maneuver in the rear of enemy defenses, then the indirect approach to the objective will pay handsome dividends. We have seen that recognizing the indirect approach, in view of enhanced mobility that allows a force to protect itself from any direction, will be difficult. The key to this lies in one of Liddell Hart's maxims, "threaten alternative objectives".<sup>8</sup> In the midst of battle, achieving tactical surprise is difficult. However, by posing threat to various objectives at the same time, the defender can be kept guessing as to the true direction of any thrust. Thus surprise may be achieved by the choice of objective. Of all of Liddell Hart's maxims, this one of threatening more than one objective simultaneously, will allow the adoption of the indirect approach.



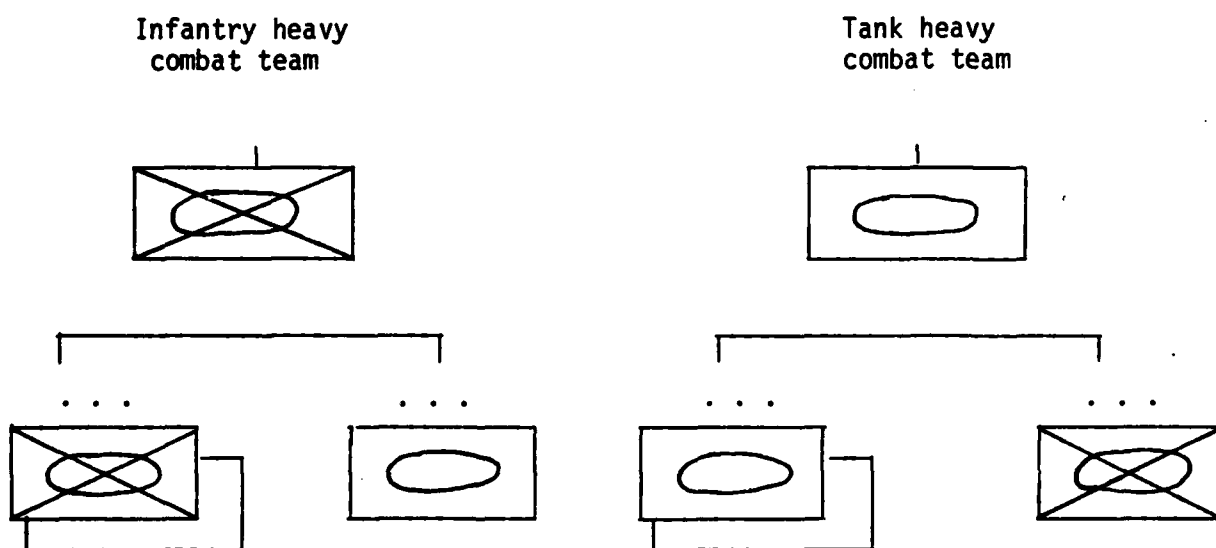
Thus to achieve mobility on the modern battlefield, a commander would do well to employ the expanding torrent method of attack and attempt to employ the indirect approach to deal with enemy defenses. He will need to keep in mind Liddell Hart's axioms, much as he might ensure the observance of the principles of war. Finally, in discussing mobile tactics one caveat requires mention. There tends to be some confusion that speed and mobility are synonymous. While mobility does require rapid movement, there will be times when a battle may proceed slowly, such as during the initial break-in to create a passage for the movement of the exploitation force. In a mobile battle, there will be occasions when movement will be extremely slow and not necessarily always rapid. The aim of all action on the battlefield will be to create opportunities to bring into play superior mobility to unhinge the enemy and upset his defensive plans. To achieve such mobility, by fighting if necessary, the force will have to be organized correctly. The requirement of detailed examination for deciding the optimum mix of tanks and infantry during battle, has already been mentioned. We can, however, draw certain general conclusions regarding such organization.

#### ORGANIZATION AND EQUIPMENT

The need for a combined arms team on the battlefield has now been established after experience in varied wars since the Second World War. It is necessary to decide before organization is discussed, as to what is the basic unit of combat. Liddell Hart suggested that it should be a platoon,<sup>9</sup> because a platoon that comprises three or four squads, has the ability to maneuver, using its own elements. Thus a platoon should

not be broken up any further into subunits for combat. This appears true even today. However, when grouping armor and infantry together, it does mean that platoons may be cross attached with each other. A company sized headquarters should have the ability to command and control a mix of tank and infantry platoons.

In a mobile attack, depending upon whether the task of a unit is the initial break-in, or passage through the breach to operate in the rear, its organization will have to be infantry or tank predominant. The slower phases of the battle will have to be handled by infantry heavy forces and the rapid ones by tank heavy forces. Yet, these will have to be combined arms teams. If we go back to the argument that a platoon should remain the basic unit of combat, then it can be said that teams based on a company headquarters, can be organized into tank or infantry heavy teams. The following figure will serve to clarify this point.



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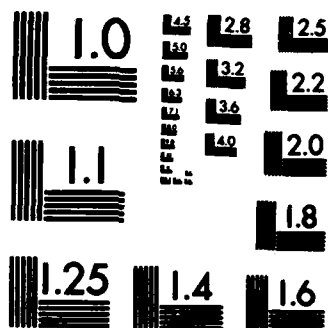
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MICROCOPY RESOLUTION TEST CHART  
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Similarly, a number of company sized combat teams can be grouped under a battalion headquarters, to give armor or infantry heavy combat groups. Two infantry heavy combat teams will have to be supported by at least one tank heavy combat team, to retain the combined arms structure. No mention is made here for grouping of artillery, helicopters, engineers and air assets with the combat groups, because they can be grouped according to availability. It is the ratio of tanks to infantry that is important and needs to be considered. The peacetime organization of tank and infantry units can either be mixed, as on the French pattern, or separate as with the British or U.S. armies.

The equipment of such teams has to be such that primarily it supports mobile action. The infantry needs mobility and protection, comparable to the armor with which it cooperates. This is not such a problem because infantry fighting vehicles are constantly being improved. The present antitank and air defense capability of the infantry has made it self-sufficient to deal with most kinds of threat, but such capability needs to keep abreast of further developments and needs constant updating. It is reiterated that in an infantry heavy combat team, the tank element is required for maneuver and not protection against enemy tanks. Conversely, a tank heavy combat team needs infantry for its protection, to protect itself against threat infantry which has enhanced antitank capability. The interdependence only increases as better weapons are introduced onto the battlefield.

#### CONCLUSION

The study of Liddell Hart's doctrine on infantry tactics shows that the theories propounded some sixty years earlier, still have

applicability. There has been a quantum leap in technology since the mobile attack was first proposed, but there is a theoretical base in the doctrine which is as relevant today as ever before.

This thesis has traced the progression of Liddell Hart's theories and their applicability. Success in a modern war is going to depend upon achievement of superior mobility on the battlefield. This will be particularly important for a force that is outnumbered and attempts to force a decision by tactical and technical superiority. We have seen the requisites necessary to employ the expanding torrent method of attack and the conditions under which an indirect approach will be achieved. There is a need to study the basic nature of Liddell Hart's theories for achieving success and the study must cover fields of leadership, tactics, organization and equipment. The combined arms team, first proposed by Liddell Hart, has proven itself in battle. A future commander seeking success will need to achieve mobility superior to his adversary, whatever the conditions he operates in. This he can best do by studying Liddell Hart's theories and applying them to suit his particular requirements.

## CHAPTER V NOTES

<sup>1</sup>Note 22 to Chapter I.

<sup>2</sup>Heinz Guderian, Panzer Leader, trans. C. Fitzgibbon (New York: Dutton, 1952), p. 20.

<sup>3</sup>Jay Luvaas, The Education of an Army (Chicago: University of Chicago Press, 1964), p. 376.

<sup>4</sup>U.S. Department of the Army, Field Manual No. 100-5, Operations (Washington, D.C.: U.S. Army Adjutant General Publications Center, August 1982), p. 9-1.

<sup>5</sup>Chapter III, Section 3 and Note 18.

<sup>6</sup>Chapter IV, Section 3 and Note 11.

<sup>7</sup>Liddell Hart, "Colonel Bond's Criticism. (A Reply).", The Royal Engineers Journal, November 1922, pp. 304-305. Also quoted in Chapter III, Section 2.

<sup>8</sup>Liddell Hart quoted in Chapter II, Section 2. Analysis in Chapter IV, Section 3.

<sup>9</sup>Chapter II, Section 2 and Notes 3 and 4.

## BIBLIOGRAPHY



## BIBLIOGRAPHY

### PRIMARY SOURCES

#### BOOKS

- Liddell Hart, B.H. A Science of Infantry Tactics Simplified. London: William Clowes & Sons, Ltd., 1926.
- Liddell Hart, B.H. Great Captains Unveiled. London: Blackwood, 1927.
- Liddell Hart, B.H. New Methods in Infantry Training. Cambridge: Cambridge University Press, 1918.
- Liddell Hart, B.H. The Future of Infantry. Harrisburg, PA: Military Service Publishing Co., 1936.
- Liddell Hart, B.H. The Liddell Hart Memoirs, Volume I: 1895-1938. New York: G.P. Putnam's Sons, 1965.
- Liddell Hart, B.H. The Liddell Hart Memoirs, Volume II: The Later Years. New York: G.P. Putnam's Sons, 1965.
- Liddell Hart, B.H. The Tanks, Volume I: 1914-1939. New York: Praeger, 1959.
- Liddell Hart, B.H. The Tanks, Volume II: 1939-1945. New York: Praeger, 1959.
- Liddell Hart, B.H. History of the Second World War. New York: G.P. Putnam's Sons, 1971.
- Liddell Hart, B.H. Strategy, The Indirect Approach. New York: Praeger, 1972.
- Liddell Hart, B.H. Thoughts on War. London: Faber, 1944.
- Liddell Hart, B.H. Why Don't We Learn From History. New York: Hawthorn Books Inc., 1971. (Original ed., London: Allen & Unwin, 1944.)

#### ARTICLES

- Liddell Hart, B.H. "Colonel Bond's Criticisms. (A Reply)." The Royal Engineers Journal (November 1922), pp. 297-309.

- Liddell Hart, B.H. "Suggestions on the Future Development of the Combat Unit." RUSI Journal (November 1919), pp. 666-669.
- Liddell Hart, B.H. "The 'Man-in-the-Dark' Theory of Infantry Tactics and The 'Expanding Torrent' System of Attack." RUSI Journal (February 1921), pp. 1-22.
- Liddell Hart, B.H. "The 'Ten Commandments' of the Combat Unit." RUSI Journal (May 1919), pp. 288-293.
- Liddell Hart, B.H. "The Soldier's Pillar of Fire by Night." RUSI Journal (November 1921), pp. 619-626.

## SECONDARY SOURCES

### BOOKS

- Alger, John I. The Quest for Victory. Westport, CT: Greenwood Press, 1982.
- Bond, Brian. Liddell Hart. New Brunswick, NJ: Rutgers University Press, 1977.
- Carver, Field Marshal Michael. The Apostles of Mobility. New York: Holmes and Meier Publishers, Inc., 1979.
- Dalvi, Brigadier J.P. Himalayan Blunder. New Delhi: Hind Pocket Books Private Ltd., 1972.
- Dictionary of National Biography, 1951-1960. London: Oxford University Press, 1971.
- Earle, E.M., ed. Makers of Modern Strategy, Military Thought from Machiavelli to Hitler. Princeton, NJ: Princeton University Press, 1943.
- English, John A. A Perspective of Infantry. New York: Praeger, 1981.
- Fraser, David. Alanbrooke. New York: Atheneum, 1982.
- Fuller, J.F.C. Memoirs of an Unconventional Soldier. London: Ivor Nicholson and Watson Ltd., 1936.
- Guderian, Heinz., trans. C. Fitzgibbon. Panzer Leader. New York: Dutton, 1952.
- Herzog, Chaim. The War of Atonement. Boston: Little, Brown, 1975.
- Higham, Robin. The Military Intellectuals in Britain 1918-1939. New Brunswick, NJ: Rutgers University Press, 1966.

- Kirby, S.W. Singapore: The Chain of Disaster. New York: Macmillan, 1971.
- Lupfer, Timothy T. The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War. Combat Studies Institute, U.S. Army Command and General Staff College, Fort Leavenworth, KS. Leavenworth Paper No. 4, 1981.
- Luvaas, Jay. The Education of an Army, British Military Thought, 1815-1940. Chicago: University of Chicago Press, 1964.
- MacArthur, General Douglas. Reminiscences. New York: McGraw-Hill Book Co., 1964.
- Maxwell, Neville. India's China War. New York: Doubleday and Co., Inc., 1972.
- Mellinthin, Freidrich Wilhelm von. Panzer Battles. Norman, OK: University of Oklahoma Press, 1956.
- Montgomery, Field Marshal B.L. El Alamein to the River Sangro. London: Barrie & Jenkins LTD., 1973.
- Montgomery, Field Marshal B.L. Memoirs. London: Collins, 1958.
- Slim, Field Marshal William. Defeat into Victory. New York: David McKay Co., Inc., 1961.
- Trythall, A.J. 'Boney' Fuller. New Brunswick, NJ: Rutgers University Press, 1977.
- Wheldon, John. Machine Age Armies. New York: Abelard-Schuman Ltd., 1968.

#### GOVERNMENT DOCUMENTS

- British War Office Publication No. 8472. Conduct of War. London: H.M.S.O. (Modified and reprinted in India), 1952.
- The Infantry Journal, Inc. Infantry in Battle. 2d ed. Washington, D.C., 1939.
- U.S. Department of the Army. Field Manual 100-5, Operations. Washington, D.C.: U.S. Army A.G. Publications Center, 1982.

#### ARTICLES

- Altham, E. "The Royal United Service Institution 1831-1931." RUSI Journal (1931), pp. 235-245.

- Anonymous. "Infantry Tactics, 1914-1918." RUSI Journal (August 1919), pp. 460-469.
- Bond, Lieutenant Colonel L.V. "The Tactical Theories of Captain Liddell Hart (A Criticism)." The Royal Engineers Journal (September 1922), pp. 153-163.
- Chopra, Maharaj K. "The Himalayan Border War: An Indian Military View." Military Review (May 1963), pp. 8-16.
- Eiseman, Rear Admiral Ben. "Border War." Marine Corps Gazette (September 1976), pp. 19-25.
- Gunsburg, Jeffrey A. "Liddell Hart and Blitzkrieg!" Armor (March-April 1974), pp. 26-30.
- Howard, Michael. "Liddell Hart." Encounter (June 1970), pp. 37-42.
- Howard, Michael. "The Liddell Hart Memoirs." RUSI Journal (February 1966), pp. 58-61.
- Icks, Robert J. "Liddell Hart: One View." Armor (November-December 1952), pp. 25-27.
- Larson, Robert H. "B.H. Liddell Hart: Apostle of Limited War." Military Affairs (April 1980), pp. 70-74.
- Trythall, A.J. and Bond, Brian. "The Fuller - Liddell Hart Lecture." RUSI Journal (March 1979), pp. 21-31.
- Vertzberger, Yaacov. "India's Strategic Posture and the Border War Defeat of 1962: A Case Study in Miscalculation." The Journal of Strategic Studies (September 1982), pp. 370-392.
- Walden, John W. "Liddell Hart." Military Review (September 1954), pp. 32-45.
- Walker, Colonel G. Letter to the Editor, The Royal Engineers Journal (October 1922), p. 238.
- Weller, Jac. "Sir Basil Liddell Hart's Disciples in Israel." Military Review (January 1974), pp. 13-21.

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